

2023 International Conference on Electrical, Electronics, Communication and Computers (ELEXCOM 2023)

**Roorkee, India
26-27 August 2023**



**IEEE Catalog Number: CFP23PZ2-POD
ISBN: 979-8-3503-0512-8**

**Copyright © 2023 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:	CFP23PZ2-POD
ISBN (Print-On-Demand):	979-8-3503-0512-8
ISBN (Online):	979-8-3503-0511-1

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

TABLE OF CONTENTS

Comparative Study of Machine Learning Algorithms for IoT Security	1
<i>Ishmeet Jaggi, Heena Wadhwa</i>	
Design and Control of a Robotic Hand for Generating Gestures Based on Indian Sign Language.....	6
<i>Yash Verma, R. S Anand</i>	
Machine Learning Based Techniques for Workload Prediction in Serverless Environments	12
<i>Nevlin T Noble, Yadu P Dev, Christina Terese Joseph</i>	
Temperature Independent Resistorless CMOS Voltage Reference	18
<i>Munna Kumar Singh</i>	
Hybrid Cloud Service Portability Platform	23
<i>Vimal Galani, Chaitanya Subhedar, Mitali Sonawane, Siddhi Wakchaure, Bhumesh Masram</i>	
An Efficient Approach for Image Forgery Detection Using Deep Convolutional Neural Network	28
<i>Neha Dhiman, Hakam Singh, Abhishek Thakur</i>	
Solar Tracker with Obstacle Detection Vehicle	33
<i>Yashdeep Singh, Umesh Patidar, Vivek Gaur, Shivendra Singh Thakur, Harikant Bilthare, Kritika Bansal</i>	
Comparative Study for Deep Deterministic Policy Gradient and Soft Actor Critic Using an Inverted Pendulum System.....	38
<i>Aditya Shelke, Devang Vyas, Abhishek Srivastava</i>	
Underwater Diver Gesture Recognition	44
<i>Sudeep Mangalvedhekar, Shreyas Nahar, Sudarshan Maskare, Kaushal Mahajan, Anant Bagade</i>	
Design and Modifications of Rotor Flux Barrier in Synchronous Reluctance Motor for E-Bike.....	50
<i>P. Kodanda Rama Sai, M. Deepak, C. Bharatiraja</i>	
Cluster Analysis in Insulating Fluids Using k-Means and Hierarchical Clustering Methods.....	56
<i>Raymon Antony Raj, Sampath Kumar Venkatachary, Sarathkumar D, Sivadasan J, Leo John Baptist Andrews, Srinivasan Murugesan</i>	
Agreements and Disagreements in the Selection of Natural Esters for Power Transformers.....	62
<i>Sampath Kumar Venkatachary, Raymon Antony Raj, Sarathkumar D, Sivadasan J, Leo John Baptist Andrews, Srinivasan Murugesan</i>	
IOT Based Intelligent Bus Monitoring System	68
<i>Sarathkumar D, Raymon Antony Raj, Suresh M</i>	
Ferrous Metal Segregation with IOT	74
<i>Sarathkumar D, Srinivasan Murugesan, Raymon Antony Raj, Albert Alexander Stonier, Sampath Kumar Venkatachary, Leo John Baptist Andrews, Annamalai Alagappan</i>	
IoT Based Plantation System for Smart Home Farming	80
<i>Vimal Rai, Sanjay Patidar</i>	
Design and Development of Fire Fighting Hexacopter Drone	85
<i>Anupam Kumar, Tanmay Kumar Barjatya, Vishal Verma, Sawant Raj Singh, Anand Agrawal</i>	

Novel Design of Metamaterial Inspired Substrate for Compact Dual Band Stacked Patch Antenna	91
<i>Zalak Patel, Ashish Saravaiya, Vedvyas Dwivedi</i>	
Multiple Disease Prediction System Using Machine Learning	97
<i>Rahul Shukla, Rupali Sawant</i>	
Tracing Food Products in Supply Chain Using DLT Enabled Blockchain Technology	103
<i>Tanishq Soni, Deepali Gupta, Monica Dutta, Gifty Gupta</i>	
Q-Learning Based Network Access Policy Management for Zero Trust Security in IIoT	109
<i>Anamika Singh, Rajesh Kumar Dhanaraj, Anupam Kumar Sharma, Balamurugan Balusamy, Ganga Sharma, Shilpy Agrawal</i>	
Multi-Module Deep Learning and IoT-Based Pest Detection System Using Sound Analytics in Large Agricultural Field	114
<i>Md. Akkas Ali, Rajesh Kumar Dhanaraj, Anupam Kumar Sharma, Balamurugan Balusamy, Geetha V, Veena Grover</i>	
A PFI Bridgeless Cuk Converter-Based LED Lamp Drive	120
<i>Tanmay Shukla, Aftab Ahmed Ansari, Anwar Ahamed Ansari</i>	
A Study for Securing IoV Using Blockchain.....	125
<i>Suman Saurabh, Suryanshu Raghav, Sachin Kumar Gupta, Mohd Najim</i>	
Frequency Calibration System for wBMS.....	130
<i>Aditya N, Govinda Raju M, Kaveri Banakar</i>	
Detection of Malus Plant Infection Using Fifteen Layer Deep Convolutional Neural Network Model	136
<i>Manish Sharma, Vikas Jindal</i>	
A Comparative Analysis of Risk Factors for Appropriate Screening of Cervical Cancer	142
<i>Saqib Sarwar, Saeem Ansari, Saiful Islam</i>	
Design of Two-Channel Linear Phase Filter Bank Using Sparse PSO	148
<i>Perupogu Goutham, Teena Soni, Anil Kumar, G. K. Singh</i>	
Direction of Arrival Estimation of Wideband Sources: Trend Analysis of Mean Square Error Vs Regularization Parameters	152
<i>Devki Sharma, Sandeep Santosh</i>	
Identifier-Based Rendezvous Scheme for Asynchronous Cognitive Radio Wireless Networks.....	156
<i>Sangeeta Sa, Arunanshu Mahapatro</i>	
Design of a Wideband and High – Gain Stacked Cylindrical DRA for WLAN, Wi-Fi, and WiMAX Applications.....	162
<i>Binnu Yadav, Shivani Anand, Gagandeep Bharti</i>	
Performance Evaluation of Microwave Absorbing Materials Through Radar Cross Section Simulation	167
<i>Navdeep Singh, Sankarsan Padhy, Anil Kumar Chaubey</i>	
Optimizing RF Parameters in Novel Si _{1-x} Ge _x /GaAs JLTFET Through Ge Mole Fraction Variation	173
<i>Kaushal Kumar, Preeti Yadav, Subhash Chander Sharma, Vinay Kumar, Ajay Kumar, Aditya Jain</i>	

Functional Safety Assessment of Battery Management System of Autonomous Electric Vehicle	178
<i>S. R. Sreeraj, T. J. Sarvoththama Jothi</i>	
Multi-Factor Behavioral Real Time Authentication for Enhanced Security in Digital Environment	184
<i>Manu Srivastava, Ishita Naik</i>	
Design of Differential Evolution Optimization Fused Transmission Line Modelling Derived Multilayer mmWave Absorber	189
<i>Ranjeet Pratap Singh Bhadriya, Varun Bajaj, Ravi Panwar</i>	
Unlocking ALS Insights with the Power of Artificial Intelligence and Machine Learning.....	193
<i>Raghav Khanna</i>	
A UAV Based Sound Acquisition System for Acoustic Monitoring of Birds.....	199
<i>Michael Clayton, Lin Wang</i>	
Implementation of a Real-Time Simulator to Evaluate the Power System Stabilizer	205
<i>Dakshita Pathak, D. K. Sambariya</i>	
IL-YOLOv5(Improved Loss in YOLOv5): An Improved Multi-Object Detection Model Focusing on Snowy Weather Conditions in Mixed Driving Environments for Self-Driving Cars	211
<i>Rashmi, Rashmi Chaudhry</i>	
Model Order Reduction Using Arithmetic Optimization Algorithm	217
<i>Shivam Gupta, Prakhar Singh, Gaurav Singh, Sadabrij Singh, Md. Sameer Ansari</i>	
Hybrid CNN & Random Forest Model for Effective Potato Leaf Disease Diagnosis.....	222
<i>Aayushi Gupta, Rupali Gill, Durgesh Srivastava, Susheela Hooda</i>	
Robust Adaptive System Identification and Noise Filtering Using Bregman Divergence Based Algorithms.....	228
<i>Parth Sharma, Pyari Mohan Pradhan</i>	
Design and Analysis of Multi-Level Converters in Real-Time Using OPAL-RT Simulators.....	234
<i>Vishal Nagar, D. K. Palwalia</i>	
Hyper-Parameter Tuning with Grid and Randomized Search Techniques for Predictive Models of Hotel Booking	240
<i>Abhay Raj Yadav, Sushant Shekhar, Anurag Vidyarthi, Rishi Prakash, R. Gowri</i>	
Sales Prediction in the Retail Industry Using Machine Learning: A Case Study of BigMart.....	245
<i>Hrishabh Upadhyay, Sushant Shekhar, Anurag Vidyarthi, Rishi Prakash, R. Gowri</i>	
Visual Techniques for Clustering Tendency Assessment of Networks	251
<i>Ayshika Kapoor, Anirudh Anand, Dheeraj Kumar</i>	
Quantum Gateway Security with Fault Tolerance	257
<i>Jaganath Prasad Mohanty, Kamalakanta Mahapatra</i>	
A Compact Substrate Integrated Waveguide-Based Multiband Antenna with Seamless Integration for UAV-Based Agricultural Applications	263
<i>Meha Agrawal, Ravi Yadav, Anjali Agrawal</i>	
Real Time Agricultural Monitoring with Deep Learning Using Wireless Sensor Framework	267
<i>Dibyaru Mukherjee, Avik Das, Nabamita Ghosh, Sarita Nanda</i>	

FPGA Implementation of Systolic Array for 2D Convolution Using Residue Number System	273
<i>Tulip Bera, Shuvabrata Dey</i>	
Finding Most Influential Places Using AR, VPS, Game Theory and Deep Learning Techniques.....	279
<i>Archit Kandu, Mukul Yadav, Aadarsh Agarwal, Sonid Chaudhary, Anjan Bandyopadhyay, Sujata Swain</i>	
Low-Cost Sensor Based Automated Smart Parking System for Large Parking Space Optimized with a Streamlined Vehicle Allocation Algorithm	285
<i>Km Shikha Pandey, Akhilesh Kumar Chaudhary, Sudhanshu Verma</i>	
SMRI Classification of Alzheimer's Disease Using Genetic Algorithm and Multi-Instance Learning (GA+MIL).....	291
<i>Sushmitha S, Chitrakala S, Bharathi U</i>	
Proficient Dazzling Crow Optimization Routing Protocol (PDCORP) for Effective Energy Administration in Wireless Sensor Networks.....	295
<i>R. Karthikeyan, R. Vadivel</i>	
Design and Performance Analysis of Microstrip Patch Antenna with Optimum Parameters for S Band Applications	301
<i>Amit Kumar Pathak, Maneesha Dwivedi, Neelam Srivastava</i>	
Design and Investigation of Frequency Selective Surface Loaded Thermoplastic Polyurethane Polymer-Based 5G Absorber	307
<i>Anjali Agrawal, Anil Kumar, Ravi Panwar</i>	
Improved K-Means Clustering Algorithm for Band Selection in Hyperspectral Images	311
<i>O. Subhash Chander Goud, T. Hitendra Sarma, C. Shobha Bindu</i>	
Diagnosis Support Model for Autism Spectrum Disorder Using Neuroimaging Data and Xception.....	317
<i>Abhishek Jha, Kainat Khan, Rahul Katarya</i>	
Denoising of Fundus Images Using Feed-Forward Convolutional Neural Networks	323
<i>Anuj Kumar Parashar, Gopal Singh Phartiyal, Bambam Kumar</i>	
Court Judgement Prediction Using Long-Short Term Memory and Convolutional Neural Network.....	329
<i>M. Anand Kumar, V Kavitha, A Dhanu Saswanth, Alvin Nishant D, Anshul Ghanshala</i>	
Unraveling the Landscape of Bitcoin Research Using Machine Learning: A Topic Modelling Approach	335
<i>Sarveshwar Kumar Inani, Gaurav Kabra, Gaurav Nagpal, Peterson Owusu</i>	
Novel Adaptive Threshold Algorithm for Through the Wall Imaging.....	341
<i>Shailendra Singh Yadav, Prabhat Sharma, Vineet Singh, Dharmendra Singh</i>	
Sentimental Voice Recognition: An Approach to Analyse the Emotion by Voice	345
<i>Anjali Gupta, Divya Mishra</i>	
MarbleBot: A Conversational Recommender and Assistance Chatbot for Marble Selection Based on Dialogflow.....	351
<i>Aniket Jain, Sneh Soni</i>	
Seamless Live Ambulance Booking System with Patient Health Monitoring: Enhancing Emergency Care	357
<i>Aryan Raj, Sakshi Sharma, Purnima Saluja, Shubham Kumar, Narinder Kaur</i>	

Critical Analysis of Image Processing Based Classical Approach for Camouflaged Target Detection: Computer Vision Approach.....	363
<i>Abhinendra Singh, Rishika Bansal, Aarush Aggarwal, Priyadarshi Ghosh</i>	
A Study to Investigate the Influence of Γ Radiation on Microwave Absorption Characteristics of Barium Titanate/Exfoliated Graphite Nanocomposite.....	368
<i>Udeshwari Jamwal, Annupriya Dhiman, Nishtha Chaudhry, Dharmendra Singh, K. L. Yadav, Richa Saini</i>	
Experimental Investigations to Enhance Precision and Accuracy in UAV Photogrammetry of 3D Model	374
<i>Mahendran S, Eswar K, Praveen Kumar R, Dineshwaran S, Vinyojita M, Asokan R, Seralathan S</i>	
Hybrid Protocol for Cluster Head Selection for Energy Efficient Routing in WSN.....	380
<i>Shankar Madkar, S. A. Pardeshi, M. S. Kumbhar</i>	
Detecting Hate Speech Utilizing Deep Convolutional Network and Transformer Models	386
<i>Utkarsh Mittal</i>	
Application of a Modified Non-Bridged Cuk Converter for an Active PF Improved BLDC Motor Drive.....	390
<i>Tanmay Shukla, Ankur Kumar Gupta, Uliya Mitra, Kaushal Kishor Ahirwar, Mirza Jawad Baig</i>	
A Survey on Intrusion Detection System for IoT Networks Based on Artificial Intelligence	396
<i>Saksham Checker, Madhuri Yadav, Rahul Katarya</i>	
Planar Dualband SIW Antenna for K Band and Mm Wave Radar Applications	402
<i>Praveen Kumar Chakravarti, V. S. Pandey, Manisha Bharti</i>	
Study of Urban Change Detection Using Landsat 8 Satellite Data: A Case Study of Dehradun City, Uttarakhand, India	407
<i>Ved Prakash Dubey, Rishi Prakash, Vivek Chamoli, Prag Mittal</i>	
Frequency Selective Surface-Based Rasoerber with Broadband Tunable Transmission Window for Airborne Applications	412
<i>Priyanka Bajaj, Dharmendra Singh</i>	
Design and Implementation of Full-Subtractor Using 4 to 1 Line Multiplexer Based on Micro Ring Resonator Nonlinear Switching	417
<i>Ujjwal Sharma, Sushanta Mahanty, Ajay Kumar, Sujan Adhikary, Kumari Amrita Pritam, Shalini Kumari</i>	
Improving Quality Assurance: Automated Defect Detection in Soap Bar Packaging Using YOLO-V5	423
<i>Badal Nishant, S. S. Gill, Balwinder Raj</i>	
Camouflage Target Detection Using Deep Learning with Drone Images.....	429
<i>Laxman Singh Khangarot, Anish Kumar, Bikramjeet Singh, Dharmendra Singh</i>	
Towards High Efficiency CZTS Solar Cell with HTL Using SCAPS-1D.....	434
<i>Amrita Srivastava, Bramha P. Pandey</i>	
Comparative Study of Elastic Net Regression, Naive Bayes & Lasso Regression	438
<i>Rashika Bangroo, Sanjoy Raj Verma, Shivangi, Shakuntala</i>	

GWO-Based Workflow Scheduling in Cloud-Fog Environments	444
<i>Dinesh Soni, Neetesh Kumar</i>	
Development of Image Analysis Based Methodology to Detect Weed in Drone Images.....	450
<i>Shriji Singh, Vyomika Singh, Dharmendra Singh</i>	
Unveiling the Superiority: Comparative Analysis of ANFIS, FOPID, and PI Controllers in Grid-Connected EV Systems for G2V/V2G Applications	456
<i>Gaurav Yadav, Mukhtiar Singh</i>	
A Comprehensive Review of Heart Disease Classification Techniques Utilizing ECG Signal Analysis.....	462
<i>Akshita Gour, Muktesh Gupta, Rajesh Wadhvani, Sanyam Shukla</i>	
A Compact CSRR Loaded 4-Port MIMO Antenna for V2X Communication.....	468
<i>Devraj Gangwar, Amalendu Patnaik</i>	
Composite Power System Reliability Evaluation Using Artificial Neural Networks.....	473
<i>Chiranjeevi Yarramsetty, Tukaram Moger, Debashisha Jena</i>	
Critical Analysis of Machine Learning Technique for Discriminating the Similar Vegetation Pattern.....	478
<i>Kundan Rathore, Ajay Kumar Maurya, Laxman Singh Khangarot, Dharmendra Singh</i>	
Identification of Rice Leaf Diseases Using CNN and Transfer Learning Models.....	482
<i>Souvik Banerjee, Bikash Sadhukhan</i>	
Development of an Ensemble Machine Learning-Based Decision Support System for Patient Admission in Healthcare Unit	488
<i>Tanusree Pathak, Susmit Sekhar Bhakta, Arghya Das, Bikash Sadhukhan</i>	
Predictive Analysis of Optimal Automated Teller Machine Site Selection Using Machine Learning and Deep Learning: A Comprehensive Study on Variables, Challenges, and Opportunities	494
<i>Akshat Rastogi, Yash Sharma, Shreya Mukherji, Rohit Kumar Kaliyar, Vimal Kumar Baghel</i>	
Design of 2×2 Super-Wideband MIMO Antenna for S/C/X/Ku/Ka Band Communications	500
<i>Shreya Pourush, R. P Yadav</i>	
The Development of Machine Learning Method for Analyzing EEG Signals for Diagnosingng Alzheimer Disease	505
<i>Swayamprabha Alias Megha Mane, Arundhati A. Shinde</i>	
PixelVerse: Secure and Efficient File Storage and Transfer Through Video Embedding	512
<i>Karun Sharma, Kuldeep Chaurasia, Aarush Aggarwal, Rahul Sahani</i>	
Investigation of Machine Learning Approaches for Retrieval of Soil Moisture Using NavIC Signal.....	517
<i>Sankalp Rai, Pranav Agarwal, Rakshit Ya, Sushant Shekhar, Rishi Prakash, Dharmendra Kumar Pandey, Anurag Vidyarthi</i>	
Hybrid Minkowski Fractal FSS Based Multiband Polarization Insensitive Radar Absorber	523
<i>Sunil Jorwal, Ashish Dubey, Rajeev Gupta, Smriti Agarwal</i>	
Load Balancing in Cloud Using Honeybee Optimization	526
<i>Nitin Thapliyal, Priti Dimri</i>	
High-Resolution Image Synthesis Based Channel Estimation	530
<i>Sachin Agrawal, Ayush Yadav, Owais Salim</i>	

Real-Time Facial Emotion Detection System Using Multimodal Fusion Deep Learning Architecture.....	534
<i>Sridhar K V, Sitaram Thripurala</i>	
Breast Cancer Detection Using SEResNeXt and Swin Transformer.....	540
<i>Sashank Talakola, Devi Vara Prasad Pattupogula, Raja Karthik Vobugari, Balaji Ummadisetty</i>	
Machine Learning Aided Spectrum Sensing	546
<i>Raunaq Singh Jabbal, Vishwas Srivastava, Binod Prasad</i>	
A Review of Diverse Machine Learning Algorithms for Spam E-Mail and Text Detection	552
<i>Pranjal Mairal, Sneha Soni</i>	
A Survey of the State-Of-the-Art Reinforcement Learning-Based Techniques for Autonomous Vehicle Trajectory Prediction	558
<i>Vibha Bharilya, Neetesh Kumar</i>	
Crop Phenology Studies Using RGB Drone Data	564
<i>Ajay Kumar Maurya, Laxman Singh Khangarot, Dharmendra Singh</i>	
Analysis and Comparison of a High-K Dielectric Vertical Channel Based Organic Thin Film Transistor.....	569
<i>Sugandha Yadav, Poornima Mittal, Shubham Negi</i>	
Ensembled HAR Approach Using Stacking on Inertial Sensors Data.....	573
<i>Neha Gupta, Suneet Kumar Gupta, Vanita Jain</i>	
Analytical Study of the Dual-Band Log-Periodic Antenna with MIMO Configuration for S-Band CubeSat Application.....	579
<i>Rajesh Yadav, Shailza Gotra, Vinay Shankar Pandey, Preeti Verma</i>	
Emergency Response App for Enhancing Location-Based Services Using Socket.io and WebRTC	584
<i>Anshul Soni, Akhil Dalal, Kuldeep Chaurasia, Mukund Pratap Singh</i>	
Robust Control Design for Grid-Tied EV System with SOGI-Based Architecture in Wide Voltage Range Scenarios	589
<i>Gaurav Yadav, Mukhtiar Singh</i>	
Sensor Node-Based Smart Irrigation System with IoT Framework	595
<i>Aryavardhan Sharma, Mitesh Solanki</i>	
Optimizing Electricity Bill, Grid Performance, and User Satisfaction in a Comprehensive Home Energy Management System with Electric Vehicles and Home-To-Grid Capabilities.....	601
<i>Tanmay Arya, D. Saxena, P. Misra</i>	
Design and Analysis of Programmed Face Monitoring System	607
<i>Ashutosh Kewat Manjhi, Amit Singh Rajawat, Anshika Srivastava</i>	
Hardware-Based Implementation of Target Tracking in Unmanned Aerial Vehicles (UAVs).....	613
<i>Rishi Agarwal, Sathwik Gundala, G S S Chalapathi</i>	
Improving Feature Vector for Extractive Text Summarization of Legal Judgement	619
<i>Ajay V Saravade, Pratiksha R Deshmukh</i>	
A Study on Integration of Trust Management and Application Placement in Fog Computing.....	624
<i>Ravi Yadav, Gaurav Baranwal</i>	

Categorization of IRIS Flower Using Different Machine Learning Strategies.....	630
<i>Amit Singh Rajawat, Ashutosh Kewat Manjhi, Anshika Srivastava</i>	
Design and Performance Evaluation of a Multiband Microstrip Patch Antenna Array for Wireless Application	636
<i>Rajanish Kumar Chaurasiya, Maneesha Dwivedi, Neelam Srivastava</i>	
Performance Analysis of RSMA-Based Multi-User MISO System	642
<i>Kunal Agham, Ajeeet Singh Shekhawat, Yatindra Nath Singh, Subrahmanyam Swamy Peruru</i>	
Data-Driven Approach to Predict Spot Market Price in Indian Electricity.....	648
<i>Subeekrishna M. P., Lekshmi R. R.</i>	
An Approach for Validation of Soil Moisture Algorithms in Heterogenous Agricultural Regions Using Synthetic Dataset	653
<i>Akanksha Garg, Jasmeet Judge, Alejandro Monsivais-Huertero, Pang-Wei Liu, Jonathan Richetti</i>	
VLSI Architecture for Low Complexity Zero Forcing Equalizer in OTFS Modulation	656
<i>Sai Kumar Dora, Rakesh Kumar Yadav, Manodipan Sahoo, Himanshu B. Mishra</i>	
Machine Learning-Assisted Diagnosis of Speech Disorders: A Review of Dysarthric Speech.....	662
<i>Shaik Mulla Shabber, Mohan Bansal, Kodali Radha</i>	
Enhancing Plant Leaf Disease Classification Performance Through EfficientNetB3 and Hyperparameter Optimization	668
<i>Mayur Desai, Namrata Ansari</i>	
Design of Metasurface Absorber and Polarizer with Pixelated Approach.....	674
<i>Piyush Ranjan, Bambam Kumar, Rajan Agrahari</i>	
CanScan: Non-Invasive Techniques for Oral Cancer Detection.....	679
<i>J. Vijaya, Kondury Rishabh, Pratyush Parashar</i>	
Study on Intelligent Hierarchical Security Framework for VANETS	684
<i>Anupama Verma, Gulista Khan, Kamal Kumar Gola</i>	
Self-Interference Cancellation in a Full-Duplex MIMO Relay Under Non-Linear Hardware Impairments.....	690
<i>Santosh K. Singh, Ankit Kumar, Aryan Dhiman, Abhay K. Sah</i>	
Evaluation of a 2-D ConvNet for Early and Multiple Target Detection and Binary Classification in Sugarcane Fields Using UAV Images.....	695
<i>Vyomika Singh, Shriji Singh, Dharmendra Singh</i>	
Multi-Mode Tunable Terahertz Microstrip Patch Antenna for Wireless Communication	700
<i>Vishal Singh, Gaurav Varshney, Bambam Kumar</i>	
An Efficient Broadband Absorber Design and Development Using E-Waste Based Heterogeneous Composite.....	703
<i>Anshika Verma, Shailza Gotra, Dharmendra Singh, G. D. Varma</i>	
Development of Methodology for Multiple Low Dielectric Targets Detection Using TWI Radar System	707
<i>Suman Anand, Shailza Gotra, Vineet Singh, Dharmendra Singh</i>	

Feasibility Study of Breast Cancer Detection Using Microwave Imaging with the Machine Learning Approach	711
<i>Pravin Mali, Shailza Gotra, Vineet Singh, Dharmendra Singh</i>	
Experimental Analysis for Classifying Mixed Classes Using Sentinel 1 and Sentinel 2 Data	715
<i>Anjana N J Kukunuri, Anusha Singh, Ajay Kumar Maurya, Aaradhyaa Saini, Dharmendra Singh</i>	
Signal Space Diversity Based Non-Orthogonal Multiple Access System Employing M-Ary PSK	719
<i>Ankita Chauhan, Anshul Jaiswal</i>	
Optimal Machine Learning Model for the Relationship Between Grain Size, Channel Thickness, and Grain Boundary Trap Density in 3D NAND Strings	725
<i>Dikendra Verma, Upendra Mohan Bhatt, Anurag Vidyarthi</i>	
A Decentralised Model for Pricing of Competitive Electric Vehicle Charging Stations Considering the Distribution System	731
<i>Adyasha Sahoo, Deep Kiran, Narayana Prasad Padhy</i>	
Predicting Rain and Thunderstorm in Jaipur Using Machine Learning Techniques.....	737
<i>Shikha Verma, Ankush Agarwal, Himanshu Sharma</i>	
An Approach to Model Soil and Vegetation with HFSS for Synthetic SAR Data Generation	741
<i>Anjana N. J. Kukunuri, Dhruv Lal, Harshith Srigadde, Jaydeep Singh, Dharmendra Singh</i>	
Melanoma Detection Using Channel and Block Attention Module	745
<i>Rishi Agrawal, Neeraj Gupta, Anand Singh Jalal</i>	
Data-Driven Based Optimal Operation of Distribution Systems Integrated with Electric Vehicles Using Deep Neural Network	750
<i>Md Raza Ali, Deep Kiran, N. P. Padhy</i>	
Use of Machine Learning on Satellite and Drone Images for Agriculture Application.....	754
<i>Ausaf Hasan Tarique, Othman Omran Khalifa, Md. Rafiqul Islam, Harish Kumar, A. K. Singh</i>	
Industry 4.0: IoT and Cloud Computing Enabled Smart Waste Management System	760
<i>Kh. Gainner Monsang, Madhu Kirola, Kapil Joshi, Rajiv Kumar, Harish Chander Anandaram, Richa Gupta</i>	
Internet-Of-Things Enabled Automation of E-Logistic Framework for Healthcare Sector in Smart Cities.....	766
<i>Sachin Sharma, Saurav Kumar Tripathi, Shaurya Sinha</i>	
Dual-Wideband DGS Based Dielectric Resonator Antenna for C-and Ku-Band Applications	772
<i>Dipanjan Dutta, Sudhakar Sahu</i>	
True RMS-Weighted KNN Based Underlying Cause Recognition of Power Quality Disturbance.....	776
<i>Rajat Kumar, Shalini Kumari, Zaissica, Kashish Agrawal, Sanjana Chahar, Prachi Yadav, Ajay Kumar Saxena</i>	
FPGA Implementation of FIR Filter Using Quaternary Base Number System (QBNs).....	782
<i>Tulip Bera, Shuvabrata Dey</i>	
Design and Development of a Smart and Multipurpose IoT Embedded System Device Using ESP32 Microcontroller.....	788
<i>Shuvabrata Dey, Tulip Bera</i>	

Design and Performance Analysis of a Dual-Band BPF for 5G mmWave Communications.....	794
<i>Kishan Yumnam, Sukhpreet Singh</i>	
Medical Dataset Preparation and Privacy Preservation for Improving the Healthcare Facilities Using Federated Learning Approach	799
<i>Bagesh Kumar, Prakhar Shukla, Krishna Mohan, Akash Bharadwaj, Yuvraj Shivam, Chandan Kumar</i>	
Identification of Autism Spectrum Disorder Using Facial Images with Big Transfer Approach.....	805
<i>Akshay Khanna, Mayank Mishra, Umesh C. Pati</i>	
Fault Prediction of Induction Motor Using machine Learning Algorithms	810
<i>U. Ramani, A. Ambika, A. Subramaniya Siva, A. Suganyamahalakshmi, N. Senthilkumar, G. Ranjith</i>	

Author Index