

2022 Second International Conference on Next Generation Intelligent Systems (ICNGIS 2022)

**Kottayam, India
29-31 July 2022**



**IEEE Catalog Number: CFP22RMU-POD
ISBN: 978-1-6654-6793-3**

**Copyright © 2022 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:	CFP22RMU-POD
ISBN (Print-On-Demand):	978-1-6654-6793-3
ISBN (Online):	978-1-6654-6792-6

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

PAPER ID	Title	Authors	PAGE
18	Autonomous Scheduling and Routing System to Maximize Machine Shop Throughput	Pratik Suryawanshi; Amar Yekane; Prasad Sawantdesai	1
19	PID based ANFIS control of Inverted Double Pendulum System	Ashwani Kharola;Rahul;Varun Pokhriyal	5
23	Omicron Case Prediction using Machine Learning	Ayush Kumar; Dr. Alpana ; Mamta Arora	10
31	A Review on Posture Detection and Correction Using Machine Learning and Deep Learning	Srijan .; Mallika .; Dr. Alpana; Priyanka Gupta	15
32	An Entropy based approach to investigate the heterogeneous sensory pattern in Autism Spectrum Disorders	Priyalakshmi Sheela; Subha D Puthankattil	20
33	Effectiveness Of Cuckoo Search On Short Term Load Forecasting	Saroj Panda ; Papia Ray	26
34	Machine Learning Based Heart Disease Prediction	Ambika Sekhar; Amrutha Babu; Adithya Udayan; Jayalekshmi V. K.	32
38	Detection of Breast Cancer from Histopathological Images.	Agna Shaju P.; Subhija E. N.	37
41	A Metamaterial Loaded Substrate Integrated Waveguide Antenna for High Frequency Wireless Applications	Ansal K. A.; Nina Cleetus; Maheswary Sreenath; Arjun B Murali	42
42	Paddy Pest Classification using Deep Learning based Features	Ananyasreya P. P.; Subhija E. N.	46
43	Design of Reconfigurable Filter Structure Based on FRM for Wideband Channelizer	Rinu C. Varghese; Amir A.	51
44	Wind Energy and Pumped Hydro Storage Integrated Power System Risk Analysis using VaR and CVaR	Nitesh Kumar Singh;Chaitali Koley;Sadhan Gope	57

45	COVID RayScan	Varun Verma; Aldric Ivan Pinto; Benjamin A Joseph; Suvarna Bhatsangave	62
46	Feature Selection using Improved Slime Mould Algorithm for Classification of Medical Datasets	Amukta Malyada Vommi; Krishna Tirumala Battula	67
47	A Model for Relief Transportation Network in Disaster Management	Binju K Biji, Swapnesh S	73
59	Integrated Control and Monitoring Systems in Urban Sewage Treatment Plants Using Advanced Process system	Deepa R, Pravinkumar R, Kumaresan K, Janani M, Carolin Monisha C, Gopala Krishnan V	78
74	Modelling of Passivity based Controller for Buck Boost Converter	Lavish Gupta;Sulata Bhandari;Deepika	84
79	Indigenous Knowledge system of Kerala Fisherfolks to mitigate coastal hazards: A Case of Thiruvananthapuram District	Prof.Smitha M.V. , Prof.Dr.Binumol Tom	90
80	Analysis of Driver Behaviour Towards Road Safety Measures Using Driver Behaviour Questionnaire	Haritha B, Dr.Preethi P.	96
83	Facility allocation for rakes at a railway terminus	Swapnesh Subramanian, Narayan Rangaraj,Raghunathan Rajesh	102
89	Machine Learning Approach for Breast Cancer Detection using Thermal Imaging	Ankur Kumar Aggarwal; Dr. Alpana; Mrinal Pandey	107
97	Close-Grained Classification of Military Air-Crafts	Suprava Patnaik; Abhinit Kumar; Kumar Piyush; Arnav Katyayan;; Shuvranshu Sengupta;; Subhajit Tripathy	N/A
113	Islanding Detection and Transition between Grid Connected and Standalone Mode of a PV Plant	Priyanka K; Afsher P A; Manoj Kumar M. V.	112
114	Recruiter Rating by Final Year Students of an Engineering College	Rajesh Raghunathan, Reena Murali	N/A

124	Bio-medical Image Denoising using Autoencoders	Jintu Merin Thomas; Ameenudeen P.E.	118
125	Sparse Ramanujan Sequences (SRS) transform based signal denoising	Deepa Abraham; Manju Manuel	124
127	Survey paper on the Forward Kinematics Solution of a Stewart Platform	Safeena M K;Jiji K S;Ramesh Kumar P	130
131	Classification of Emotions from Speech Signal using Machine Learning	Saritha C.; Dr. A. R. Jayan	138
132	Performance Analysis in Kesterite CZGS/CZGSe Quantum Wells towards high-Efficiency Photovoltaic Applications	Benisha Chris A.; Soumyaranjan Routray	143
133	Risk Management and Safety Assessment in Building Construction Projects	Gladly A. D. P, Rajesh R, Sijo Thomas	147
134	Classification of Paddy Diseases Using Ellipse Fitting	Swathy K.; Anish Babu K. K.	152
135	A Review on Quantitative Models and Algorithms For Real-time Railway Rescheduling	Ebin Mathew Philip; Swapnesh S	157
140	Symbolic Domain Music Generation System Based on LSTM Architecture	Athira Remesh; Anna Paul K.; Dr. M. S. Sinith	162
141	IoT Enabled Home Automation for Differently Challenged and Elderly People Using Gesture and Voice Recognition	Juel E.Titus; Kavyalekshmi P. A.; Merin Job; Careena P.	166
147	Impact of Congestion and Demand Responsiveness on Market Power in Deregulated Power System	Anupam Mittal;Kanwardeep Singh	171
148	Super-Resolution of Retinal Fundus Images using Generative Adversarial Networks	Lakshmi A; Dhanusha P B; Muthukumar A; Dhanusha P B	176
153	A Survey On Deepfake Video Detection Techniques Using Deep Learning	Athirasree Das; Angel Viji; Linda Sebastian	180
155	A Survey on Trending attacks and the Prevention techniques in Edge Computing based networks	B.Benita B; Raja Ratna S.	184

157	A Novel Optimized Deep Learning Framework for Performance Evaluation of Different Segmentation Approaches in Ancient Devanagiri Handwritten Text Documents.	Nilima Prakash Patil; Dr. R. J. Ramteke	N/A
158	Energy Management System in Residence Using Smart Controller	Ashok Kumar B;Shanmuga Priya K;Shobha M S;Yoga Priya S;Swetha Dharshini T	190
159	Blockchain Based Trading Mechanism in Microgrid using CHIO Algorithm	Reshmi Chandra;Plabon Saha;Sayandip Roy;Tanmoy Dey;Parthasarathi Bera	195
163	Dual Open Square Loop Coupled CPW-FED Wideband Circularly Polarized Antenna	Neha M. V.; Harikrishnan A. I.; Dr. Sumi M.; Nikhil Joy; Swedha M. D.; Rahul Raju	200
165	Magneto-Static Analysis of a shower tray trap	Akhil Suresh, Jinsh N, Jinu Varghese, Radhika Raveendran, Antony J K,Gautam G Krishna	205
167	Computational study of cooling strategies in a high frequency compact transformer	Aravind V A, Manoj Kumar M, Manish M, Antony J K, Philip K Cherian, Gautam G Krishna	211
171	Speaker Diarization Using BiLSTM and BiGRU with Self Attention	Ananya Ayasi; Jacob Joshy; Rajeev Rajan	216
172	Colour Detection And Sorting Of Objects Using IoT	Rajitha Rayala; Vimala Kumari Jonnalagadda; Venkata Sai Sriya Vempati; Geetha Sravani Tumuluri; Jyothisri Tedla	221
176	A Survey on Traffic sign Classification and Recognition Methods	Revathy A S; Jyothis Joseph; Anitha Abraham	226
177	Mental Factor Classification Using Computational Model of Consciousness	Dr. R. J. Ramteke; S. S. Gharde; Dr. D. D. Bage; Dr. A. P. Dongre	232
178	Design and Performance analysis of Net Metering-based Grid Connected Solar Photo-Voltaic System	Akshay Narendra Deshmukh;Vinod K Chandrakar	238

179	Analysis of Student's Learning Perception of Online Classes in Polytechnic colleges and Engineering	Pramod Kumar K, R Rajesh, Arathy Sasi, Gladly A D P	244
181	Stability Enhancement of an Autonomous Microgrid using an Internal Model-based Controller	Kinnari Matharani;Hitesh Jariwala	251
182	Automated Hyperparameter Optimization in Machine Learning for Stock Prediction	Sudip Tiwari Bishwakarma; Gajendra Sharma	257
184	An Abridged Review of Transfer Learning Technology	Gargi Chandrababu; Ojus Thomas Lee; Rekha KS	263
187	A approach for Hybrid Security Management in Health Care for Secure Cloud Storage: A Review	Roshni Bhawe; purva gogte; swati shamkuwar	270
191	Automated Brain Tumor Segmentation of Magnetic Resonance Flair Images	Anjitha N.; Anish Babu K. K.	273
194	Calotropis (Ark) Fibers based TENG: from Waste Material to Energy Source	Jaspreet Kaur;Ravinder Singh Sawhney;Harminder Singh	278
195	Vibration Control of Pipeline Structure using Tuned Mass Damper	Rohith S P, Antony J K, Arath E S, Jawad T P, Jinesh N, Gautam G Krishna	283
200	Contingency Constrained Stochastic UC Decision with Wind Power Generation and Energy Storage	Munazza Shaikh;Kusum Verma	289
202	Energy aware firefly based sink mobility data routing in wireless sensor networks	Kavita Jaiswal; Veena Anand	295
203	Impact of Boron doping in spin coated ZnO Thin Film Transistors	Divya G; Shilpa S.Prasad; Lija Arun; Devika K.M.; K.Shreekrishna Kumar	300
205	Plant Disease Detection: A Survey on Recent Deep Learning Technologies	Reenu Susan Joseph; Nisha C. A.; Shandry K. K.	306
208	Salient Feature of State Observer in FCS-MPC for an Uninterruptible Power Supply	Renjith K K;Deepa Sankar	312
210	Novel Dual Powered Induction Cooktop	Rahul Raman R;Ashwath S;Sowmmiya U	316
211	Effect of PZT patch length on Piezo electric Energy Harvester	Arun Pradeep, Rephah O M, Jinesh N, Antony Jacob,Sidharthan S, H Harigovind	322
212	Economic Load Dispatch augmented with Environmental Considerations	Anusree Pradeep;C Sreekumar	328

214	Classification of Indian Classical Music Ragas using Graph Theory	Aatmaj Kaustubh Mhatre	333
221	Performance Analysis of OFDM IM Systems over Generalized κ - μ and η - μ Fading Channels	Mustafa Lafci; Busra Ceniklioglu; Ayse Elif Canbilen	338
226	Development of a Monitoring System for Laboratory Investigation of Slope Failure	Dipty Sarin Isaac, Vinish Nair, Harikumar Mohanan	343
230	A MACHINE LEARNING MODEL FOR ACUTE KIDNEY INJURY PREDICTION WITH NOVEL KIDNEY BIOMARKERS	FATHIMA BEGUM M; suba narayan	348
238	Performance Analysis of Metaheuristic Techniques in Combined Economic Emission Dispatch considering VPL effect for Dynamic System	Satyam Chandrakant Khairnar; Bharat Bishu; Shilpa Mishra; Shaik Abdul Gafoor	353
243	Design and Analysis of an Efficient Stationary Wavelet Transform for EOG Signal Denoising	Siddarapu Meeravali; Sura Rajitha; Upputholla Teja Sai; Manne Durga Sri; Kishore Kumar Gundugonti	359
246	Sustainability in Architectural Education in India	Tessy Varkey, Binumol Tom, Biju Augustine	365
247	Self-Attention Architecture for Ingredients Generation from Food Images	N V R Swarup Kumar J	371
251	Advancements in Failure Mode and Effect Analysis: A Review	Aparna B Mohan, Ambilikumar C K	378
253	Internet of Things Security and Forensics: Concern and Challenges for Inspecting Cyber Attacks	Dr Madhavi Dave	384
261	IMPROVING SENSITIVITY OF ZnO NANORODS FOR THE APPLICATION OF GAS SENSORS AT LOW TEMPERATURES: A REVIEW	Siva Reddy Vanga; Sarada V	390
264	Embedded Software Design in Orbital Module Sequencer for Manned Space Missions	Ranjani Krishnan; Manju C.R.; Jayalekshmy L.	396

269	Battery Monitoring Based Charge Sharing Scheme for Electric Vehicles	Jothish V Dev;Abhilash T Vijayan	402
270	1-Bit Full Adder Design Using XOR Gates by QCA Technology	Ambily vijayan; Anju George; Jaimy James Poovely; Aswathy N	408
271	Hardy Weinberg Principle Automation : A Comparative study of Neural network and Fuzzy based accessibility model for the study of Evolution	Karthika Balan; Michael Santora	414
272	Geometric Design of Road Using OpenRoads	Alfia Thaj, Er.Wilson K C, Prof.Sreelatha T	419
274	A Survey on Authentication Schemes in Multiserver Environment	Parvathy PG	423
275	Deep Feature Fusion for Facial Expression Recognition	Sakshi Indolia; Swati Nigam; Rajiv Singh	429
276	Power Quality Enhancement with Grid Integrated Solar Photovoltaic fed BESS using Unified Power Quality Conditioner	Sneha Rachel Mathew;Prince A	435
277	Respiratory Disease Detection using Depthwise Seperable Covolutional Neural Networks	Sathwik Mangu; Raghu Indrakanti; Srimanth Tenneti; Ravindar Rao	441
280	ANFIS Based Fault Locator for STATCOM Compensated Lines	Sreelekha V;Prince A	446
284	Performance Evaluation of Various Topological Software Defined Networks Using Mininet Simulator and Pox Controller	Arindam Bhattacharyya; Prakasam P	450
288	Brain Tumor Segmentation using LinkNet	pabbaraja Sameer; vissapragada anirudh raj kaushik; raghu indrakanti; Chaudhuri Manoj Kumar Swain	455
289	Speed Tracking Performance of PMSM Using Sliding Mode and Extended State Observer	Jayalekshmi J R;Sunil Kumar P R	460
290	Using BIM for Residential Projects in Kerala- Challenges and Possibilities	Surya S, Dr.Binumol Tom	465
292	A Review on Aspect Based Sentiment Analysis	Anisha Angel S J; MalaJ B	471

294	Performance Analysis of OFDM and OQAM/FBMC based Communication Networks under Vehicular Channel Models: A Comparative Study	Chaudhuri Manoj Kumar Swain; Indrakanti Raghu; Jagatpati Raiguru	477
296	Human body gesture controlled gaming application	Shubham Metkar; Jayesh Mahajan; Mrs. Jayamala Adsul; Bhairavi Chavan	482
297	Performance Analysis of Distributed Compressed Sensing Schemes for Data Aggregation in Low-Power Wireless Sensor Networks	Ebin M. Manuel; Vinod Pankajakshan	488
298	Performance Enhancement of High Speed Optical Communication System using Apodized and Chirped FBG with Parameter Optimization	Sreeragi G.R.; Vijayakumar N.	494
302	Recognition of Underwater Starfishes using Deep Learning	Shrija Sheth; Dr Dinesh Prajapati	500
305	A Hybrid Solar and Fuel-Cell Powered High Gain ZETA Converter for BLDC Driven Water Pump	Aswanth K;Shanifa Beevi S	505
306	Chest Abnormality Detection From X-Rays Using Deep Learning	Vishwa Manish Desai; Anita Thengade	511
308	Bus Clamped PWM Based Vector Control of PMSM Drive	Renjith V.K.P;Anjali Mohan;Meera Khalid	517
310	Prediction of Solar Irradiance and Wind Speed using Deep Recurrent Neural Network	Parvathy Ashok;Sreelekha V	524
315	Symbol-Interferometry for PAPR Reduction of OTFS Modulation	Aare Gopal; D. Krishna Reddy; Srinivasarao Chintagunta	528
322	Evaluation of Single Current Regulator Based Field Weakening Strategy For PMSM Drives and Experimental Validation using HIL	Shahana Beegum O S;Meera Khalid;Binojkumar A C	532
325	Power Quality Improvement of Three-Phase Wind Energy Conversion System Under Abnormal Grid Condition	Pooja Yadav;Tripurari Nath Gupta	538
327	Structural Health Monitoring aided by neural networks	Ansa Varghese, Bino I.Koshy	544

328	Exploring the Concept of Greener Habitat Through Traditional Architectural Practices of Kerala	Ansa Varghese, A.B Sivan	N/A
329	Industry 4.0 and Sustainability in Through Life Smart Manufacturing	Steny Ann Sabu, Ciby Thomas	550
330	Design and Development of Negative Conversion Ratios Using Capacitor Topology by Selecting Different Arbitrary Condition	Saahithi S; Naveenya N; Sonika S R; Navya Sree H; S D Gagandeepa; Vivekanandan Subburaj	556
335	Reconfigurable Biquad Filter For Low Power Application	S K Dash; S N Mishra; Amit Bakshi; Dr. N K Rout	560
340	Nonlinearity Mitigation in Radio over Fiber Network using Nonlinear Fourier Transform based Optical Fiber link	S Sreedevi Nair; Dr.N.Vijayakumar	566
341	Analysis of a Solid-State Switch as Peaking Switch in a Solid-State Marx Generator	Neelam S.Pinjari;Bindu.S	572
344	Improvement in Voltage Profile of Grid Connected Fuel Cell	Purvaa Saxena;S.K. Jha	578
345	Complex IF filter for GNSS Applications	Krishnapriya Boban; Malavika J; Parvathy S Kumar; Hridaya U Mallia; Prameela B	582
352	New Generation Technology to detect Blood type	N. Sarojini; D. Sahithya; D. Ramadevi; Mohammad Nadiya; P. Akshaya	N/A
353	EVMFFR: Electronic Voting Machine with Fingerprint and Facial Recognition	Thirumal R.; Rahul B. R.; Rahulpriyesh B.; Konguvel E.; Sumathi G.	588
356	Emergency Alert System for Women Safety using Raspberry Pi	Vineeth Reddy C.; Lohitt Venkata Saai N.; Konguvel E.; Sumathi G.; Sujatha R.	594
363	Generation of Real-Time RF switching signal by polarization-dependent Four Wave Mixing technique	Anshula Vijayam S. J.; Archa Chandrasenan; Joseph Zacharias	598