

The Institution of Electronics and Telecommunication Engineers

IETE Journal of Research

Volume 68 • No. 4 • July-August 2022



SB 15/11/22



http://mc.manuscriptcentral.com/tijr

Subscriber Copy: Not for Resale Cost per copy Rs 542 for Paid Subscribers

CONTENTS

Editorial

2345 Scanning the Issue Shiban K. Koul

Articles

- 2353 Design of a Meander Line Monopole Antenna Array Based Hilbert-Shaped Reject Band Structure for MIMO Applications Zainab Al-Dulaimi, Taha A Elwi and Dogu Cagdas Atilla
- 2363 A Novel Distributed Matching Global and Local Fuzzy Clustering (DMGLFC) for 3D Brain Image Segmentation for Tumor Detection

 M. Sumithra and S. Malathi
- 2376 Linear Algebra on Parallel Structures Using Wiedemann Algorithm to Solve Discrete Logarithm Problem KS Spoorthi, R. Padmavathy, S K Pal and S Ravi Chandra
- 2390 Analytical Prediction of Optimal Split Ratio for Short-Time Duty PM Brushless DC Motors Considering Winding Thermal Limitation

 Quanwu Li, Zili He, Wei Jiang, Ze Liu and Wei Dong
- 2402 An Optimized DTW Algorithm Using the RMSE Approach to Classify the Liquids in Ka-Band T. Ozturk
- 2410 Design of Tri-Band Microstrip Patch Rectenna for Radio Frequency Energy Harvesting System Manavalan Saravanan and Anumuthu Priya
- 2416 Truncated Ground Plane Multiband Monopole Antenna for WLAN and WiMAX Applications Chandan

Review Article

- 2422 Effect of Charge Bump Position Shifting on Negative Resistance and Noise Performance of Lo-Hi-Lo IMPATT J. Banerjee and M. Mitra
- 2433 Impact of Intelligent Demand Response for Load Frequency Control in Smart Grid Perspective Kamlesh Bharti, Vijay P. Singh and S. P. Singh
- 2445 Designing a Quasi-Z-Source Inverter with Energy Storage to Improve Grid Power Quality S. Honarbari and M. Alizadeh Bidgoli
- 2454 Slit Loaded Textile Microstrip Antennas
 R. Sreemathy, Shahadev Hake, Shamali Sulakhe and Sumit Behera
- 2463 Breast Tumor Detection in Digital Mammogram Based on Efficient Seed Region Growing Segmentation Neeraj Shrivastava and Jyoti Bharti

Review Article

- 2476 Multifocus Image Fusion Based on Multiresolution Pyramid and Bilateral Filter Simrandeep Singh, Nitin Mittal and Harbinder Singh
- 2488 Coronary Artery Heart Disease Prediction: A Comparative Study of Computational Intelligence Techniques Safial Islam Ayon, Md. Milon Islam and Md. Rahat Hossain
- 2508 Feature Selection and Instance Selection from Clinical Datasets Using Co-operative Co-evolution and Classification Using Random Forest V. R. Elgin Christo, H. Khanna Nehemiah, J. Brighty and Arputharaj Kannan

- 2522 Millimeter-Wave in the Face of 5G Communication Potential Applications Nazih Khaddaj Mallat, Madeeha Ishtiaq, Ateeq Ur Rehman and Amjad Iqbal
- 2531 Modified Grey Wolf Randomized Optimization in Dementia Classification Using MRI Images N. Bharanidharan and R. Harikumar



- 2541 A Novel Method of Health Services Website for Myocardial Infarction Prediction in Online Health Hojatollah Hamidi
- 2548 Robust and Intelligent Type-2 Fuzzy Fractional-Order Controller-Based Automatic Generation Control to Enhance the Damping Performance of Multi-Machine Power Systems

 Ali Darvish Falehi
- 2560 Dynamic Fractional-Order Sliding Mode Strategy to Control and Stabilize Fractional-Order Nonlinear Biological Systems Arash Pourhashemi, Amin Ramezani and Mehdi Siahi
- 2571 New Electronically Tunable Low-frequency Quadrature Oscillator Using Operational Transresistance Amplifier Gurumurthy Komanapalli, Rajeshwari Pandey and Neeta Pandey
- 2580 FloVasion: Towards Detection of non-sensitive Variable Based Evasive Information-Flow in Android Apps Bharat Buddhadev, Parvez Faruki, Manoj Singh Gaur, Shubham Kharche and Akka Zemmari
- 2595 An Optimal Time-Based Resource Allocation for Biomedical Workflow Applications in Cloud N. Mohanapriya, G. Kousalya and P. Balakrishnan
- 2609 Determining the Optimal Operating Point of CHP Units with Nonconvex Characteristics in the Context of Combined Heat and Power Scheduling Problem Ali Esmaeel Nezhad, Farideh Ghanavati and Amir Ahmarinejad

- 2622 Control of Three-Phase Induction Machine Drives During Open-Circuit Fault: A Review Rahemeh Tabasian, Mahmood Ghanbari, Abdolreza Esmaeli and Mohammad Jannati
- 2640 Unknown Resistive Torque Estimation of a Rotary Drilling System Based on Kalman Filter R. Riane, M. Kidouche, R. Illoul and M. Z. Doghmane
- 2652 VEP Detection for Read, Extempore and Conversation Speech Kumud Tripathi and K. Sreenivasa Rao
- 2661 A Modified Tunable Q Wavelet Transform Approach for Tamil Speech Enhancement J. Indra, R. Kiruba Shankar, N. Kasthuri and S. Geetha Manjuri
- 2675 Fast and Energy-Efficient Block Ciphers Implementations in ARM Processors and Mali GPU W. K. Lee, Raphael C.-W. Phan and B. M. Goi
- 2683 Ocular Artifact Suppression in Multichannel EEG Using Dynamic Segmentation and Enhanced wICA K. P. Paradeshi and U. D. Kolekar
- 2697 Analysis and Classification of Three Trimesters during Normal Pregnancy Using Bispectrum S. T. Veerabhadrappa and Anoop Lal Vyas
- 2707 Enhancement in the Vision of Branch Retinal Artery Occluded Images Using Boosted Anisotropic Diffusion Filter An Ophthalmic Assessment S.G. Gayathri and S. Joseph Jawhar
- 2716 Design and Implementation of Robust Low Power ECG Pre-processing Module Kirti Tripathi, Harsh Sohal and Shruti Jain
- 2723 Design and Study of Novel Tunable ELF-PEMF System for Therapeutic Applications Himani Kohli, Sangeeta Srivastava, Manan Oza, Satish Chouhan, Shivani Verma, Anju Bansal, Bhuvnesh Kumar and Sanjeev Kumar Sharma
- 2736 Analysis of Compressed Foetal Phono-Cardio-Graphy (PCG) Signals with Discrete Cosine Transform and Discrete Wavelet Transform

 Vibha Aggarwal, Sandeep Gupta, Manjeet Singh Patterh and Lakhwinder Kaur
- 2743 An Efficient Optimized Feature Selection with Machine Learning Approach for ECG Biometric Recognition Kiran Kumar Patro, Allam Jaya Prakash, M. Jayamanmadha Rao and P. Rajesh Kumar
- 2755 The Blood Vasculature of the Retina Using Routine Segmentation C. R. Dhivyaa and M. Vijayakumar
- 2764 Patterned Ground Shield for Inductance Fine-tuning
 Nur S. Yusof, Norlaili M. Noh, Jagadheswaran Rajendran, Asrulnizam A. Manaf, Yusman M. Yusof, Harikrishnan Ramiah,
 Shukri K. K. Mohd and Mohamed F. P. Mohamed

- 2779 Near-Perfect Time–Frequency Analysis of Power Quality Disturbances Utkarsh Singh
- 2790 Coordinated Power Management of the Subgrids in a Hybrid AC–DC Microgrid with Multiple Renewable Sources Pramod Bhat Nempu and N. S. Jayalakshmi
- 2801 Power Management Strategy for an Electric Vehicle Driven by Hybrid Energy Storage System R. Bindu and Sushil Thale
- 2812 Fast Scale Invariant Tracker and Re-identification for First-Person Social Videos Jyoti Nigam and Renu M. Rameshan
- 2826 SCAN-CogRSG: Secure Channel Allocation by Dynamic Cluster Switching for Cognitive Radio Enabled Smart Grid Communications

 M. Monisha and V. Rajendran
- 2848 Intelligent Fractional-Order-Based Centralized Frequency Controller for Microgrid Zaheeruddin and Kavita Singh
- 2863 A Microgrid Concept for Thermal and Electrical Energy Supply of a Sport Recreation Center: Case Study S.R.C.A Fatima Mašić, Ajla Merzić, Adnan Bosović and Mustafa Musić
- 2876 Performance Comparison of Reconstruction Algorithms in Compressive Sensing Based Single Snapshot DOA Estimation Kankanala Srinivas, Saurav Ganguly and Puli Kishore Kumar
- 2885 Efficiency and Cost Based Multi-optimization and Thermal/Electromagnetic Analyses of 3-Phase Dry-Type Transformer Burak Esenboga and Tugce Demirdelen
- 2898 A Dual-Band Zero-Index Metamaterial Superstrate for Concurrent Antenna Gain Enhancement at 2.4 and 3.5 GHz Zain Haider, Muhammad U. Khan and Hammad M. Cheema
- 2909 Design of Beam Steering-Switching Array for 5G S-Band Adaptive Antenna Applications Part-I and Part-II Vidya P. Kodqirwar, Shankar B. Deosarkar and Kalyani R. Joshi
- 2922 An Intelligent Genetic Fuzzy Classifier for Transformer Faults Amit Kukker, Rajneesh Sharma and Hasmat Malik
- 2934 Advances and Steady-State Development of Dual Stator-Winding Induction Machine Mohamed Arbi Khlifi
- 2941 Modification of Standard Kalman Filter Based on Augmented Input Estimation and Deadbeat Dissipative FIR Filtering Mahmoud Reza Hadaegh, Hamid Khaloozadeh and Mohammad Taghi Hamidi Beheshti
- 2953 Recognition of Indian Sign Language Using ORB with Bag of Visual Words by Kinect Sensor Jayesh Gangrade, Jyoti Bharti and Anchit Mulye
- 2968 Bearings-only Passive Target Tracking: Range Uncertainty Ellipse Zone S. Koteswara Rao
- 2979 Wearable Multilayer Patch Antenna with Electromagnetic Band Gap Structure for Public Safety Systems Ameena Banu Mustafa and Tamilselvi Rajendran
- 2989 Electronically Tunable Grounded Capacitance Multiplier Shashwat Singh, Jatin, Neeta Pandey and Rajeshwari Pandey
- 3001 Board-Level Ku-Band Power Amplifier: Design and Challenges Hemant Kumar Singhal and Karun Rawat
- 3010 The Smallest Form Factor Monopole Antenna with Meandered Radiator for WLAN and WiMAX Applications Hamza Ahmad, Wajid Zaman, MuhibUr Rahman and Fauziahanim Che Seman
- 3019 A Comparative Study Between the PI and SM Controllers Used by Nonlinear Control of Induction Motor Fed by SVM Matrix Converter

 Abdelhakim Dendouga

- 3030 Deep Learning Techniques for EEG Signal Applications A Review D. Merlin Praveena, D. Angelin Sarah and S. Thomas George
- 3038 Study of Solar PV Panel Under Partial Vacuum Conditions: A Step Towards Performance Improvement Ankur Kumar Gupta, Yogesh K. Chauhan, Tanmoy Maity and Ria Nanda

- 3046 Anemometric Type Flow Transmitter Using Transistor as a Primary Sensor Anamika Lata and Nirupama Mandal
- 3056 Schizophrenia Detection Using Biomarkers from Electroencephalogram Signals
 Aarti Sharma, Jaynendra Kumar Rai and Ravi Prakash Tewari

- 3065 An Analysis of Distributed Programming Models and Frameworks for Large-scale Graph Processing Alejandro Corbellini, Daniela Godoy, Cristian Mateos, Silvia Schiaffino and Alejandro Zunino
- 3074 Dual Stage Normalization Approach Towards Classification of Breast Cancer M. A. Aswathy and M. Jagannath
- 3086 A Hybrid PSO-ANN-based Fault Classification System for EHV Transmission Lines Pranav D. Raval and Ashit S. Pandya
- 3100 Pole Clustering-based Modified Reduced-Order Model for Boiler System S. Arun, T. Manigandan and P. Mariaraja
- 3108 IoT-based Energy Monitoring and Controlling of an Optimum Inclination Angle of the Solar Panels Pon Vengatesh Ramamurthi and Edward Rajan Samuel Nadar
- 3119 Signal Converter with Three-Phase and Quadrature Outputs for Driving Synchros and Resolvers Darko Vyroubal, Vedran Vyroubal, Damjan Belavić and Zoran Halić
- 3130 Stability Analysis of DC-DC Converters Applying Lie Algebra Debanjana Bhattacharyya and Kishor Chandra Pati