



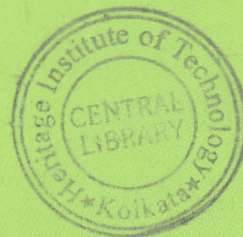
The Institution of Electronics and
Telecommunication Engineers

28

ISSN 0377-2063 (Print)
E-ISSN 0974-780X (Online)

IETE Journal of Research

Volume 69 • No. 2 • February 2023



SB 26/4/2023



Taylor & Francis
Taylor & Francis Group

<http://mc.manuscriptcentral.com/tijr>

Subscriber Copy : Not for Resale
Cost per copy Rs 406 for Paid Subscribers

CONTENTS

Editorial

- 601 Scanning the Issue
Shiban K Koul, Arun Kumar and Ranjan K Mallik

Articles

- 611 A Secured Zobrist Hash Symmetric Sentinel List Based Malicious Attack Detection in Vanet
G. Jeyaram and M. Madheswaran
- 623 A New Approach to Vision-Based Fire and its Intensity Computation Using SPATIO-Temporal Feature
Mirza Adnan Baig, Najeed Ahmed Khan and Muhammad Masood Rafi
- 635 Framework for Identification of Critical Factors for Open Source Software Adoption Decision in Mission-Critical IT Infrastructure Services
F. Umm-e-Laila, S. Najeed Ahmed Khan and T. Asad Arfeen
- 649 Real-Time Implementation of Iterative Learning Control for an Electro-Hydraulic Servo System
C. Naveen, B. Meenakshipriya, A. Tony Thomas, S. Sathiyavathi and S. Sathishbabu
- 665 FDTD Based Simulation of Light Extraction in OLED using Triangular Band Structure
P. Santhoshini and K. HelenPrabha
- 670 Hybrid Elliptic Curve Cryptographic Approach for Data Privacy and Authentication in Secured Map Reduce Layer (SMR) for Optimized CPU Utilization
Arogya Presskila Xavier and Ramesh Kesavan
- 684 A Secured Healthcare Management and Service Retrieval for Society Over Apache Spark Hadoop Environment
J. Vimala Ithayan and C. Sundar
- 704 Atom Search Optimized FOPI Controller of the DC-DC SEPIC Model with Matignon's Theorem Stability Analysis
Maheswari Sepperumal, C. B. Venkatramanan, Arangarajan Vinayagam and Veerapandiyan Veerasamy
- 723 Vision-based Hand Gesture Recognition for Indian Sign Language Using Convolution Neural Network
Jayesh Gangrade and Jyoti Bharti
- 733 Mining Frequent Patterns Partially Devoid of Dissociation with Automated MMS Specification Strategy
S. Datta, K. Mali and S. Ghosh
- 753 ADVISOR-Based Performance Analysis of a Hybrid Electric Vehicle and Comparison with a Conventional Vehicle
Avanish Kumar and P. R. Thakura
- 762 A Sturdy Nonlinear Hyperspectral Unmixing
M. Venkata Sireesha, P. V. Naganjaneyulu and K. Babulu
- 778 Towards Neuro-Fuzzy Compensated PID Control of Lower Extremity Exoskeleton System for Passive Gait Rehabilitation
Jyotindra Narayan and Santosha Kumar Dwivedy
- 796 A Comparative Analysis of Data-Driven Based Optimization Models for Energy-Efficient Buildings
Anurag Verma, Surya Prakash and Anuj Kumar
- 813 Gain Augmentation of a Triple Notched Ultra-wideband Antenna using Compact Uiplanar Frequency Selective Surface for Ground Penetrating Radar
Surajit Kundu
- 825 A Novel Weighted Superposition Attraction Algorithm-based Optimization Approach for State of Charge and Power Management of an Islanded System with Battery and SuperCapacitor-based Hybrid Energy Storage System
Subhashree Choudhury and Nikhil Khandelwal
- 839 Parametric Tracking Across Multiple Cameras with Spatial Estimation
Patrick Sebastian, Yap Vooi Voon and Richard Comley
- 854 Performance Evaluation of Voltage Ripple-Based Passive Islanding Detection Method for a Single-Phase Utility-Connected Micro-Grid System
Rahul S. Somalwar, Diksha A. Shinde and S.G. Kadwane



- 862 A Bus Clamping PWM-Based Improved Control of Grid Tied PV Inverter with LCL Filter Under Varying Grid Frequency Condition
A. Shantanu Chatterjee
- 879 Mental Stress Assessment Using PPG Signal a Deep Neural Network Approach
Prerita Kalra and Vivek Sharma
- 886 Distributed SM MPPT Controller for Solar PV System Under Non-Uniform Atmospheric Conditions
R. Durga Devi and S. Nageswari
- 896 An Approach for Diagnostically Lossless Coding of Volumetric Medical Data Based on Wavelet and Just-Noticeable-Distortion Model
B. K. Chandrika, P. Aparna and S. Sumam David
- 909 A Miniaturized Design of Dual-band Antenna for Bidirectional Brain Machine Interface Applications
Sh. Yazdanifard and R. A. Sadeghzadeh
- 916 Hybrid Arrangement of Iterative Learning Control Strategy for Ball and Beam System
P. Ravichandran, S. Sathiyavathi, S. Sathish Babu and A. Vimala Starbino
- 924 Design and Development of Banana Leaves-based Double-layer Microwave Absorber
Soumya Sundar Pattanayak, S. H. Laskar and Swagatadeb Sahoo
- 932 ZnO and Bi-metallic (Ag–Au) Layers Based Surface Plasmon Resonance (SPR) Biosensor with BaTiO₃ and Graphene for Biosensing Applications
N. Mudgal, Ankur Saharia, Ankit Agarwal and G. Singh
- 940 A Comparative Survey of Convex Combination of Adaptive Filters
Ángel A. Vázquez, J. Gerardo Avalos, Giovanni Sánchez, Juan C. Sánchez and Héctor Pérez
- 951 Automated Delimitation and Classification of Autistic Disorder Using EEG Signal
Asit Kumar Subudhi, Monalisa Mohanty, Santanu Kumar Sahoo, Saumendra Kumar Mohanty and Bibhuprasad Mohanty
- 960 A Wideband High-Power Ridge Gap Waveguide Power Divider for High-Power Division Sub-Systems Applications
Ahmed F. Elshafey, Ehab K. AbuSaif and Mahmoud A. Abdalla
- 967 Finite Element Analysis of Graphene Oxide Hinge Structure-based RF NEM Switch
Rekha Chaudhary, Prachi Jhanwar and Prasantha R. Mudimela
- 975 An Efficient Approach to Schedule Generating Units of Combined Heat and Power (CHP) Generating System
Himanshu Anand
- 987 Feature Selection for Simple Color Histogram Filter based on Retinal Fundus Images for Diabetic Retinopathy Recognition
T. Vijayan, M. Sangeetha, A. Kumaravel and B. Karthik
- 995 Computer-Aided Detection and Diagnosis of Thyroid Nodules Using Machine and Deep Learning Classification Algorithms
B. Shankarlal, P. D. Sathya and V. P. Sakthivel
- 1007 Pressure Control of High Pressure Tubing Based on Fluid Mechanics
Yuhong Tao, Zhixin Wang, Shengang Cai and Zhile Xia
- 1013 Design of a Compact Dual-Band Antenna for On-/Off Body Communication
Anupma Gupta, Ankush Kansal and Paras Chawla
- 1022 Design and Simulation of Reliable Low Power CMOS Logic Gates
Vijay Kumar Sharma
- 1033 AI-based Building Management and Information System with Multi-agent Topology for an Energy-efficient Building: Towards Occupants Comfort
Anurag Verma, Surya Prakash and Anuj Kumar
- 1045 Added Noise in Oscillators Caused by the Transistor Base Emitter Breakdown Phenomenon
Wolfgang Griebel, Matthias Rudolph and Ulrich L. Rohde
- 1056 Multi-user High Data Rate Indoor VLC Systems
Safwan Hafeedh Younus, Aubida A. Al-Hameed and Jaafar M. H. Elmirghani
- 1070 Robust Time Resource Management in Cognitive Radar Using Adaptive Waveform Design
M. Ghadian, R. Fatemi Mofrad and B. Abbasi Arand

- 1081 Phased Sub-arrays Pattern Synthesis Method with Deep Sidelobe Reduction and Narrow Beam Width
Jafar Ramadhan Mohammed
- 1088 Efficient Power Flow Management in Hybrid Renewable Energy Systems
J. Sheeba Jeba Malar, A. Bisharathu Beevi and M. Jayaraju
- 1101 Planar Diplexer Design Using an Energetic Coupling Approach
Héctor García-Martínez, David Ramírez-Gil, Germán Torregrosa-Penalva, Ernesto Ávila-Navarro, Enrique Bronchalo and Carolina Blanco-Angulo
- 1109 A Novel Design of 28 nm Latch Type Sense Amplifier for Differential Voltage Enhancement
Yiping Zhang, Ziou Wang, Canyon Zhu and Lijun Zhang

Review Article

- 1117 Design of a Class-F Power Amplifier with GaN Device Model and Reflection Data
Merve Alemdag, Firat Kacar and Sedat Kilinc
- 1124 Investigation of Homo and Hetero-Junction Double-Gate Tunnel-FET-Based Adiabatic Inverter Circuits
M. Pown, S. Sandeep and B. Lakshmi

Review Article

- 1133 Energy-Efficient Smart Wearable IoT Device for the Application of Collapse Motion Detection and Alert
Laxmikant Dewangan and Arpita Rani Vaishnava

Review Article

- 1140 Phase Noise Impact on the Short-Term Frequency Stability of a Frequency Source
Md. Tosicul Wara, M. S. Bhuvaneshwari, M. R. Raghavendra and Usha Bhandiwad
- 1152 Maximum Power Extraction from a Wind Turbine Using Terminal Synergetic Control
K. K. Prabhakaran and R. Saravanakumar
- 1160 On the Miniaturization of Microstrip Ring-Hybrid Couplers Using Gielis Supershapes
Azam Tayebi and Davoud Zarifi