

Table of Contents

Vol. 21, No.7, July 2026

SL. No.	Title of the Paper	Name of the Author/s	Page No.
1	A CONCEPTUAL FRAMEWORK FOR THE DEVELOPMENT OF A CYBER-PHYSICAL TEST BENCH FOR PRINTED CIRCUIT BOARD ASSEMBLY PRODUCTION	Andre Fred Du Plooy ¹ , Arthur James Swart ² , Pierre Eduard Hertzog ³	01 – 18
2	DESIGN AND PERFORMANCE ANALYSIS OF A LOW-POWER ALU USING M-GDI LOGIC IN NANOSCALE FINFET TECHNOLOGY	N. Vinod Kumar ¹ , F. Vincy Lloyd ²	19 – 44
3	OPTIMIZATION OF MECHANICAL PERFORMANCE OF ALUMINUM HYBRID COMPOSITES	V. V. D. Sahithi ¹ , N. Srilatha ² , Yuhan Wang ³	45 – 57
4	IMPROVED ANALYTICAL SOLUTIONS OF THE HELMHOLTZ DUFFING OSCILLATOR BY THE EXTENDED ITERATION METHOD	Charles Baidya ¹ , B M Ikramul Haque ² , M. M. Ayub Hossain ³	58 – 70
5	A HYBRID TRUST-BASED AND PRIORITY-AWARE CONGESTION-ADAPTIVE ROUTING PROTOCOL FOR SECURE AND EFFICIENT MOBILE AD HOC NETWORKS	Sonia Singhal ¹ , Ashwani Kush	71 – 92
6	AN OPTIMUM ALLOCATION IN MULTIVARIATE STRATIFIED SAMPLING UNDER NONLINEAR CONSTRAINTS	Shuaibu Idris Adam ¹ , ² Quazzafi Rabbani	93 – 106
7	MATHEMATICAL MODELING AND STABILITY ANALYSIS OF FOREST RESOURCE DYNAMICS UNDER POPULATION PRESSURE AND AFFORESTATION EFFORTS	Pallavi Bisht ¹ , Vikas Kumar ²	107 – 129
8	DESIGN AND ANALYSIS OF AN ASYMMETRIC KITE-SHAPED PATCH ANTENNA FOR 5G/6G UAV APPLICATIONS	Tamara Z. Fadhil ¹ , Ameer A. Kareim Al-Sahlawi ²	130 – 145
9	FIXED POINT THEOREMS FOR SIMULATION FUNCTIONS IN INTERPOLATIVE $\mathfrak{S}$ -METRIC SPACE: A NOVEL APPROACH	Kajal ¹ , Manoj Kumar ²	146 – 160
10	PERFORMANCE ANALYSIS OF SWIPT-BASED RF ENERGY HARVESTING IN DIVERSITY RECEIVER OVER TWDP FADING DISTRIBUTION WITH IMPERFECT CHANNEL ESTIMATION	Niku Borgohain ¹ , Bhargabjyoti Saikia ² , H. P. Mondal ³	161 – 175
11	ENERGY-EFFICIENT BIPEDAL ASSISTIVE LOCOMOTION USING A MODIFIED HUMANOID-JANSEN WALKING MECHANISM	Amer Matrood Imran ¹ , Hayder M. Abbood ² , Ghanim M. Hachim ¹ , Salah Mahdi Ali ² , Mohammad Reza Haghjoo ³ , Borhan Beigzadeh ⁴	176 – 195
12	ADAFED-BRAINGNN: ADAPTIVE FEDERATED HYBRID CNN-GNN FRAMEWORK WITH DIFFERENTIAL PRIVACY FOR PRIVACY-PRESERVING BRAIN TUMOR DETECTION ACROSS MULTI-INSTITUTIONAL MRI REPOSITORIES	Anoop Kumar ¹ , Jyoti Shekhawat ²	196 – 210
13	TIME -RESOLVED MACHINE LEARNING FRAMEWORK FOR VOC DETECTION USING ZNO NANOSTRUCTURED SENSORS	B. Paramita ¹ , R. Sunipa ² , B. Utpal ³	211 – 225
14	EEG ARTIFACT REMOVAL USING ROBUST LEAST SQUARE ADAPTIVE FILTERING TECHNIQUE	Mihir Narayan Mohanty ¹ , Sandhyalati Behera ²	226 – 244
15	DESIGN AND EVALUATION OF AN ITERATIVE APPROXIMATE FLOATING-POINT MULTIPLIER FOR IMAGE PROCESSING	D. V. N. Bharathi ¹ , Bala Sindhuri Kandula ² , Gangula Manikanta ³ , B. Jagadeesh Babu ⁴ , Subhashini Tata ⁵ , Kosaraju Swathi ⁶	245 – 255