2022 Muthanna International Conference on Engineering Science and Technology (MICEST 2022)

Samawah, Iraq 16-17 March 2022



IEEE Catalog Number: ISBN:

CFP22BR4-POD 978-1-6654-7214-2

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:	CFP22BR4-POD
ISBN (Print-On-Demand):	978-1-6654-7214-2
ISBN (Online):	978-1-6654-7213-5

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

No.	Paper Title	Page No.
1	Optimum Coverage Area for Indoor Environments	1-5
2	Design a Low-Cost Majority Gate in QCA Nanotechnology	
3	Software-Defined Network Security – Status, Challenges, and Future trends	10-15
4	Design a photonic crystal fiber for Zinc-Cadmium detecting using Comsol Multiphysics	16-19
5	Martensite Fraction Effect on Fatigue Resistance for Double-Phase Steel Shafts	20-24
6	Surface Disinfection Using a Mobile Robot	25-30
7	Effects of Ignition Timing and Compression Ratio on Performance of GDI Engines	31-36
8	Energy Detection Based Multi-Bands Spectrum Sensing using Adaptive Threshold	37-42
9	Brain Tumor Segmentation Utilizing Thresholding and K-Means Clustering	43-48
10	Dual-Fed C-DRA Loaded by Modified Circular Patch Antenna	49-53
11	Simulations and Flight Test of AR. Drone Quadrotor using LabVIEW	54-59
12	Analysis of CT images of the COVID-19 patients	60-64
13	A Comprehensive Survey of Fiber Impairment Mitigation Technologies in High- Capacity Systems	65-70
14	Design of a Compact Dual-Band BPF for 5G Mobile Communications Using Folded $\lambda g/2$ -Line Resonators	71-76
15	A comparative Study to Show the Effect of Reducing Urban Space on Spatial Organization	77-82
16	Molecular Dynamics Simulation of SWCNT / PVA in sensors application	83-88
17	Nonlinear Investigation of Behavior of Mechanically Stabilized Earth Retaining Wall Using FEM	89-95
18	Temperature dependent electrical properties for planar Pentacene Schottky diode	96-100
19	Social Media Apps Controls Communication Devices Based on IoT	101-105
20	Hybrid Spectrum Sensing: Status, Open Problem and Future Trends	106-110
21	Node Protection using Hiding Identity for IPv6 Based Network	111-117
22	Enhanced Semantic Segmentation of Aerial images with Spatial Smoothness Using CRF Model	118-124
23	Survey on Implicit Feedbacks Extraction based on Yelp Dataset using Collaborative Filtering	125-130
24	Influence of Adding Nano Particles on Dissipation Factor and Volume Resistivity of Polymer	131-135
25	Multi-Security System Based on Fingerprint Biometric Sensor and Wi-Fi Camera	136-141
26	Theory and Computational Modelling of a 3D Electro-Absorption Modulator	142-146
27	Comparison Between the Traditional and Solar System Street Lighting System	147-151

2nd ALMuthanna International Conference on Engineering Science and Technology (MICST-2022), Almuthana University, Almuthana, Iraq

No.	Paper Title	Page No.	
28	Study about the Ability to Secure Websites using Blockchain	152-157	
29	Facemask Wearing Detection Based on Deep CNN to Control COVID-19 Transmission	158-161	
30	The Effect Of Atrium Retrofit Design On Natural Ventilation For Hot Arid Climate	162-168	
31	Virtual Performance Evaluation of Net-Zero Energy Building (NZEB) Using BIM Analysis	169-173	
32	Fast Synthesis and Characterization of Nano-SSZ-13 Zeolite by Hydrothermal Method	174-178	
33	Design of Bandpass Filter for 5G Applications with High-selectivity and Wide Band Rejection	179-183	
34	Real-Time Resource Monitoring Framework in a Heterogeneous Kubernetes Cluster	184-189	
35	Website Design using virtual reality for medical studies	190-194	
36	Safeguard Algorithm by Conventional Security with DNA Cryptography Method	195-201	
37	Effect of Transceiver Impairments on the Capacity of Correlated MIMO Channel in LTE Systems	202-207	
38	Learning Rate Estimation Model in Restricted Boltizmann Machine Neural Network for Building Recommender Systems	208-211	
39	A hybrid feature selection technique using chi-square with genetic algorithm	212-217	
40	Sustainability of Commercial Streets Evaluation of Selected Streets in Al-Kut City	218-223	
41	Security of Nanoscale Communication networks – Status, Challenges and Future Trends	224-229	
Keyno	Keynotes and Special Events		
42	6G Communication Networks: Needs, Challenges and Future Communication Technologies	230-231	
43	Author index		