

2024 IEEE 30th International Conference on Telecommunications (ICT 2024)

**Amman, Jordan
24-27 June 2024**



**IEEE Catalog Number: CFP24530-POD
ISBN: 979-8-3503-5670-0**

**Copyright © 2024 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:	CFP24530-POD
ISBN (Print-On-Demand):	979-8-3503-5670-0
ISBN (Online):	979-8-3503-5669-4
ISSN:	2771-4233

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

TABLE OF CONTENTS

Analysis of Reconfigurable Frequency Selective Surface FSS Using Square Closed Split Rings	1
<i>Mariam B. Al-Najjar, Khalil H. Sayidmarie</i>	
Harmonic Suppression for Electro-Optic Communication Systems.....	6
<i>Abdulrahman Alshehry, Izzat Darwazeh</i>	
Error Analysis of Multi-Pair Two-Way Relaying Scheme.....	11
<i>Heyam Hassan, Saud Althunibat, Mazen Hasna, Khalid Qaraqe</i>	
Automatic Surgical Items Tracking in Laparoscopic Surgery Utilizing Deep Learning for Retained Items Detection and Classification	18
<i>Susan Njeri Gitau, Ahmed H. Abd El-malek, Mohammed S. Sayed, Mohammed Abo-zahhad</i>	
Empowering Urban Traffic Management: Elevated 3D LiDAR for Data Collection and Advanced Object Detection Analysis	24
<i>Nawfal Guefrachi, Hakim Ghazzai, Ahmad Alsharoa</i>	
Investigation of Antenna Polarization Effect on Envelope Correlation Coefficient (ECC) of 2×2 MIMO System.....	29
<i>Trasma Yunita, Chairunnisa, Aloysius Adya Pramudita, Achmad Munir</i>	
Characteristics Enhancement of a Magneto-Dielectric-Based Patch Antenna by Incorporating Ferrite Material.....	33
<i>Rheyuniarto Sahlendar Asthan, Trasma Yunita, Tutun Juhana, Achmad Munir</i>	
An AI-Based Framework for Olive Disease Identification Using SqueezeNet, Artificial Neural Networks, and Support Vector Machines	37
<i>Shahed N Al-Khateeb</i>	
Performance Comparison of Machine Learning Algorithms for Keratoconus Detection.....	42
<i>Zahra J. Muhsin, Rami Qahwaji, Ibrahim Ghafir, Muawyah Al Bdour, Saif Alryalat, Mo'Ath Alshawabkeh, Majid Al-Tae</i>	
Student's Academic Performance Prediction in the Programming Techniques Course by Using Machine Learning Methods.....	48
<i>Quoc Huy-Le, Thiet Pham-Thi, Nguyen Huynh-Tuong, Khoa Vo, Tien Vu-Van, Huy Tran</i>	
Improving Fall Detection Systems Performance Via Skeleton Topology Selection by Using Graph Convolution Neural Networks.....	55
<i>Motasem S. Alsawadi, Saleh A Almarshed</i>	
Unveiling Hidden Threats in PDFs with Hybrid Malware Classification	59
<i>Sh M Zeeshan Javed, Faisal Amjad</i>	
SAMA: A Comprehensive Smart Automated Malware Analyzer Empowered by ChatGPT Integration	65
<i>Mahmoud A. Khalifa, Iman Almomani, Walid El-Shafai</i>	
PrecisionCardio: A Comprehensive Machine Learning Approach for Accurate Prediction of Heart Failure Trajectory	71
<i>Muhammad Anwar Hossain, Siam Bin Shawkat, Kazi Shaharair Sharif, Md Ikbal Hossain, Herick Asmani, Md Minhazur Rahman</i>	

Integrating LSTM Autoencoders and Self-Correction for Enhanced IoT Time-Series Analysis	75
<i>Luis Lopez, Sasisekhar Govind, Hakim Ghazzai, Abdullah Kadri</i>	
Broker-Less OPC UA PubSub Communication Model Performance Analysis	80
<i>Aydin Homay, Christos Chrysoulas, Tess Watt, Martin Wollschlaege, Mario De Sousa, Leandros Maglaras</i>	
Deep Learning-Aided Channel Estimation for Large Scale Fading Decoding in Massive MIMO Systems.....	85
<i>Iacovos Ioannou, Prabagarane Nagaradjane, Ala' Khalifeh, R Dhivyaharshini, A Harini, Vasos Vassiliou</i>	
Charging Station Planning for Electric Ride-Hailing Taxi Services	93
<i>Phillippe Forster, Anuj Mathur, Hakim Ghazzai, Abdullah Kadri</i>	
Enhancing Edge Caching Efficiency: Leveraging Social and Context-Aware Popularity Rank Prediction Via Transfer Learning.....	98
<i>Waqar Ali Aziz, Iacovos Ioannou, Marios Lestas, Vasos Vassiliou</i>	
Harnessing the Power of IoT: A Survey of Internet of Things Applications in Greenhouse Agriculture.....	106
<i>Hani Attar, Ramy M. Bahy, Ala' Khalifeh, Mohamed Hafez, Ahmed Solyman</i>	
Packet Buffering to Minimize Service Downtime and Packet Loss During Redundancy Switchover.....	113
<i>Yuta Kazato, Shogo Saito, Kei Fujimoto</i>	
LiDAR Technology for Future Wireless Networks: Use Cases and Challenges	121
<i>Omar Rinchi, Ahmad Alsharoua</i>	
Performance Analysis of Pre-Distorted Layered Asymmetrically Clipped Optical Orthogonal Frequency Division Multiplexing.....	126
<i>Xiaoqian Wang, Xia Liang, Chuan Yang, Yifei Yuan, Guangyi Liu, Jiaheng Wang, Jiangzhou Wang</i>	
Design of Intelligent Reflecting Surfaces-Assisted mmWave Systems for Proximity-Based Users	132
<i>Han Wen, Ahmad Massud Tota Khel, Khaled Humaid Altuwairgi, Khairi Ashour Hamdi</i>	
E-CommerceShield: A Framework for Enhanced Security in E-Commerce with Awareness, DNS Matching, and Blockchain Integration	137
<i>Aymen Belghith</i>	
Enhancing the Electromagnetic Scattering Properties of Microwave Absorption Composite Materials.....	143
<i>Hashem Al-Mattarneh, Umyamah Abu Shareah, Rabah Ismail, Jamal Alsadi, Faten Albtoush, Mohammad Tamimi</i>	
IoT-Driven Precision Agriculture Using Communication Technologies for Crop Quality and Real-Time Environmental Monitoring	149
<i>Ali Issa, Temitope Odedeyi, Izzat Darwazeh</i>	
Building Damage Detection Using Deep Learning Models	154
<i>Kibitok Abraham, Moataz Abdelwahab, Mohammed Abo-Zahhad</i>	
Developing an IoT-Enabled Digital Twin for Enhanced Industrial Refrigeration System Management	159
<i>Zachary Nelson, Amal Alhosban</i>	

Packet Bytes-Based Abnormal Encrypted Proxy Traffic Identification	164
<i>Shunliang Zhang, Hongce Zhao, Zuwei Fan</i>	
Design of Congestion Control Algorithm Based on Switch Queue Length Change Detection	171
<i>Wei Li, Zhaonan Wu, Bosheng Zhang, Li Zheng, Weibo Zhao, Jiaqi Zou, Songlin Sun</i>	
A Compact Frequency Reconfigurable Hook-Shaped Monopole Antenna for 5G Applications.....	177
<i>Zubaida F. Khalil, Khalil H. Sayidmarie</i>	
Enhanced In-Flight Connectivity for Urban Air Mobility Via LEO Satellite Networks.....	181
<i>Karnika Biswas, Hakim Ghazzai, Abdullah Khanfor, Lokman Sboui</i>	
Use Seasonal Autoregressive Integrated Moving Averages and Linear Regression to Forecast Jordan's Information Technology Revenue.....	186
<i>Shahed N Al-khateeb</i>	
ALT-D: Enhancing Accessibility with an Adaptive Learning Technologies Assessment Model for Students with Disabilities	191
<i>Amal Alhosban, Rana Amoush, Hassan Al-Ababneh</i>	
User-Friendly Software System for Geopolymer Concrete Slump and Strength Prediction	196
<i>Hashem Al-Mattarneh, Adnan Rawashdeh, Rabah Ismail, Faris Matakah, Nour Alhussien, Ahmad Malkawi</i>	
Microwave Waveguide Nondestructive Testing Sensor for Assessment of Steel Fiber Reinforced Concrete	203
<i>Hashem Al-mattarneh, Ahmad B. Malkawi, Rabah Ismail, Faris Matakah, Yaser Jaradat, Issam Trrad</i>	
Mobile Surface Capacitive Electrode Sensor to Assess the Corrosion Vulnerability of Concrete Materials.....	209
<i>Yaser Jaradat, Hashem Al-mattarneh, Rabah Ismail, Musab Abuaddous, Mutaz Dwairy, Faten Albtoush</i>	
Exploring the Impact of Artificial Intelligence on User Satisfaction and Acceptance in Digital Banking Services in Indonesia	215
<i>Candiwan Candiwan, Rizki Ridla Annikmah</i>	
Efficient LEO Satellite Data Management Using No-Reference Image Quality Assessment	223
<i>Nourhane Sboui, Hakim Ghazzai, Sameh Najeh, Lokman Sboui</i>	

Author Index