

2023 IEEE Symposium on Wireless Technology & Applications (ISWTA 2023)

**Kuala Lumpur, Malaysia
15-16 August 2023**



**IEEE Catalog Number: CFP2397P-POD
ISBN: 979-8-3503-1096-2**

**Copyright © 2023 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:	CFP2397P-POD
ISBN (Print-On-Demand):	979-8-3503-1096-2
ISBN (Online):	979-8-3503-1095-5
ISSN:	2324-7843

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

Improving the Verification Step of Wesolowski's Verifiable Delay Function Using Efficient Double Modular Exponentiation	1
<i>Utkarsh Tiwari, Satyanarayana Vollala</i>	
Optoacoustic Signal-Based Underwater Node Localization Technique: Overcoming GPS Limitations Without AUV Requirements	7
<i>Maliha Tasnim, Rashed Hasan Ratul</i>	
OWNTRAD: A Blockchain-Based Decentralized Application for Vintage E-Commerce Marketplaces	12
<i>Khairunnisa A. Kadir, Nur Haliza Abdul Wahab, N. Z. R. Soh, X. G. Teoh, S. K. L. Luk, Adi Wira Mohd Zin</i>	
Measurement and Analysis of International Roughness Index Using IoT-Based System	18
<i>Hadyan Hafizh, Rohana Abdullah, Muhammad Ateeq, Anwar Pp Abdul Majeed, Matilda Isaac, Bintao Hu</i>	
On the Performance of RIS-Assisted OFDM-IM: Impact of Hardware Impairments	24
<i>Busra Ceniklioglu, Ibrahim Develi, Ayse Elif Canbilen</i>	
The Implementation of a Machine Learning-Based Routing Algorithm in a Lab-Scale Testbed	29
<i>Mohammad Azmi Ridwan, Nurul Asyikin Mohamed Radzi, Kaiyisah Hanis Mohd Azmi, Ayuniza Ahmad, Fairuz Abdullah, Wan Siti Halimatul Munirah Wan Ahmad</i>	
A Brief Review on Shorting Vias Techniques for Gain Enhancement in Microstrip Patch Antenna.....	35
<i>Rabiatuladawiah Akhbar, Hajar Ja' Afar, Nurul Huda Abd Rahman, Nurulazlina Ramli, Rina Abdullah</i>	
Application to Detect Driver Distraction Using Haar Cascade Method	40
<i>Natasyha Zainuddin, Tuan Khalisah Tan Zizi Tuan Zizi, Suzaimah Ramli, Mohd 'afizi Mohd Shukran, Muslihah Binti Wook</i>	
SinAr Mobile Application for Learning the Javanese Letters: A Case Study	45
<i>Lailatul Husniah, Dimas Agung Pratama, Ilyas Nuryasin, Umi Laili Yuhana, Eko Mulyanto Yuniarno, Mauridhi Hery Purnomo</i>	
BiLSTM Neural Network Digital Predistorter with Reduced Feedback Sampling Rate.....	51
<i>Asma Ali, Majid Ahmed, Oualid Hammi</i>	
Land Use and Land Cover Mapping Using Multi-Temporal Sentinel-1 Data and Machine Learning	56
<i>Erwin L. Cahapin, Arnel C. Fajardo</i>	
Predictive Energy Management Strategy in PV/ESS/DIESEL System for Battery Degradation Reduction Using Artificial Neural Network	60
<i>Muhammad Noor M Saud, Madihah Md Rasid, Noorazliani Md. Sapari, Syed Norazizul Syed Nasir</i>	
Impact of Feature Selection Algorithms on Network Intrusion Detection	66
<i>Samyak Jain, Siddharth Bihani, Satyam Jaiswal, Anshul Arora</i>	
Android Malware Analysis Using Coefficient of Multiple Correlation.....	72
<i>Shresth Jain, Sarthak Kapoor, Anshul Arora, Sachin Kumar Sharma</i>	

The Role of IoT and Big Data in Shaping Smart Cities: A Review.....	78
<i>Muhammad Azlan Bakar, Suriani Mohd Sam, Azizul Azizan, Yusnaidi Md Yusof, Norliza Mohamed, Noraimi Shafie</i>	
Permission-Based Blockchain Consortium Network (PBCN) Uses for Cross-Border Payment.....	84
<i>Md Rafiqul Islam, Muhammad Mahbur Rashid</i>	
Estimation of Wind Power Potential for Alasaba Region - Libya	90
<i>Hosni Mokhtar Ali, Milod Zakaria Ahmed, Rida Emhammed Khamiss</i>	
Excitation and Control of Electromagnetic Surface Wave Using Surface Wave Launcher, and Reconfigurable Surfaces for 5G Applications	95
<i>Abdulrahman Alshehry</i>	
Automated and Robotic On-Wafer Probing Station	99
<i>Cerine Mokhtari, Clément Lenoir, Mohamed Sebbache, Kamel Haddadi</i>	
Latency and Cost Minimization for Task Offloading with Energy Harvesting in UAV-MEC Network.....	103
<i>Mehak Basharat, Muhammad Naeem, Alagan Anpalagan</i>	
Multi-Objective Resource Optimization in Space-Aerial-Ground-Sea Integrated Networks.....	109
<i>Sana Sharif, Mudassar Liaq, Waleed Ejaz</i>	
Intelligent Method for Classifying the Freshness of Coffee.....	115
<i>Ahmad Lu' Ai Waez Awang, Ihsan Mohd Yassin, Mohd Khairil Adzhar Mahmood, Megat Syahirul Amin Megat Ali, Fairul Nazmie Osman, Michael Tan Kwan Yeow, Farzad Eskandari, Azlan Salim, Zuhani Ismail Khan</i>	
Performance Analysis of a Rectangular Slot CPW Omnidirectional Antenna Integrated with a Voltage Doubler Circuit for RF Energy Harvesting	123
<i>Nuraiza Ismail, Ermeey Abd Kadir</i>	
Hybrid Microgeneration System Utilizing Pico-Hydro and Solar Photovoltaic Microgeneration System for Rural Area	127
<i>Afif Zuhaily Ahmad Zulkifli, Nur Nabila Mohamed, Nur Ashida Salim, Yusnani Mohd Yusoff</i>	
Passive Wi-Fi Radar Fall and Non-Fall Motion Classification Using Hybrid PCA-SVM Classifier	134
<i>Nur Emileen Abd Rashid, Hidayatusherlina Razali, Nur Luqman Saleh, Mohd Nazrin Farhan Nasarudin, Muhammad Amirul Akmal Khairul Azmi, Ali Ahmed</i>	
Comparative Analysis of the Quality of Service Performance of an Enterprise Network.....	139
<i>Mortadha Fayadh Hassan, Roslina Mohamad, Farah Yasmin Abdul Rahman, Norulhusna Ahmad</i>	
Intelligent Decision Making in Artificial Intelligence System Using Moth Flame Optimization Algorithm	144
<i>Gunasekar Thangarasu, Kesava Rao Alla</i>	
Designing and Evaluating DSS for Complex Decision Making Environment.....	149
<i>Kesava Rao Alla, Gunasekar Thangarasu</i>	
The Optimal Design to Improve Internet Service in Mosul	153
<i>Saad Ahmed Ayoob, Mahmood Samir Sadoon</i>	

Development of an Interactive Web-Based Geovisual Analytics Platform for Analysing Crime Data	158
<i>Mohammad Aman Kaif, Sanidhya Samaiya, Rapuri Alekhya Purnima, Thota Sivasankar, Achintya Roy, Akula Poojitha</i>	
3D Mapping and Indoor Navigation for an Indoor Environment of the University Campus	163
<i>Shao-En Show, Chuan-Hsian Pu, Zulaikha Kadim</i>	
PV Cell Defects Classification in Electroluminescence Images Using Gradient Histogram (HOG)	169
<i>Aina Nabilah Ahmad Yani, Khairul Khaizi Mohd Shariff, Zulkifli Othman, Shahril Irwan Sulaiman, Nor Ayu Zalina Zakaria, Ahmad Ihsan Yassin</i>	
High Q Double-Ring Complementary Split Ring Resonator to Detect Ammoniacal Nitrogen for Water Quality Applications	174
<i>Wan Nurnabihah Wan Muhammed Samsuri, Muhd Faris Sapuri, S. A. Enche Ab Rahim, Farah Adilah Mohd Kasran, Norliyana Yusof, Zuhani Ismail Khan</i>	
Characterisation and Distinction of Gelatin Using Surface Enhanced Raman Spectroscopy and Principal Component Analysis	179
<i>S. A. Jaafar, W. Mansor, A. R. Mahmud</i>	
Analysis on the Resting Brain of Children from Urban and Rural Areas Using Electroencephalogram	183
<i>Nabila Ameera Zainal Abidin, Ahmad Ihsan Mohd Yassin, Megat Syahirul Amin Megat Ali, Wahidah Mansor, Aisyah Hartini Jahidin, Mirsa Nurfarhan Mohd Azhan, Muhammad Fakharul Radzy Mohd Rozlan, Zulkifli Mahmoodin</i>	
An EEG-Based Visual Working Memory Assessment Protocol for Children	187
<i>M. N. Mohd Azhan, M. S. A. Megat Ali, W. Mansor, N. A. Zainal Abidin, A. H. Jahidin, A. I. Mohd Yassin, M. F. R. Mohd Rozlan, Z. Mahmoodin</i>	

Author Index