

2023 7th International Multi-Topic ICT Conference (IMTIC 2023)

**Jamshoro, Pakistan
10 – 12 May 2023**



**IEEE Catalog Number: CFP23TIB-POD
ISBN: 979-8-3503-3847-8**

**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:	CFP23TIB-POD
ISBN (Print-On-Demand):	979-8-3503-3847-8
ISBN (Online):	979-8-3503-3846-1

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

1	EEG Based Thought-to-Text Translation Via Deep Learning <i>Sarfraz Ali, Wajid Mumtaz, Aiman Maqsood</i>	1
2	LRCMP: A Sequential Statistical Framework for Predicting Cancer Mortality Rate <i>Mubarak Albarka Umar, Ali Nawaz, Tariq Qayyum</i>	9
3	Penta-band Circular Patch Antenna with Partial Ground for Wireless Applications <i>Muhammad Zaeem, Yasar Amin, Ali Hamza, Muhammad Zahid</i>	17
4	Dual Band Scorpion-Shaped Antenna for 5.8 GHz ISM Band and X-Band Applications <i>Muhammad Umer Farooq, Hafiz Muhammad Saleh, Muhammad Zahid, Yasar Amin</i>	23
5	Fingerprint generation and authentication through Adaptive convolution generative adversarial network <i>Syed Muhammad Nabeel Mustafa, Syeda Sundus Zehra, Alina Baber, Maria Andleeb Siddiqui</i>	27
6	PWM Waveform Generation and Control Using Rotary Encoder on Spartan-3E Starter Board <i>Muhammad Bilal, Malhar Khan, Razia, Abdul Munaim, Adil Hussain, Muhammad Alim</i>	32
7	2×2 Hexagonal-Shaped Antenna Array for 5.8 GHz ISM Band Applications <i>Muhammad Muqadas Taqdeer, Yasar Amin, Qazi Mohtishim Amjad, Muhammad Zahid</i>	38
8	Go Together: Bridging the Gap between Learners and Teachers <i>Asim Irfan, Atif Nawaz, Muhammad Turab, Muhammad Azeem, Mashal Adnan, Ahsan Mehmood, Sarfaraz Ahmed, Adnan Ashraf</i>	42
9	Design, Implementation, and Power Analysis for Network-on-Chip Architectures <i>Ayesha Farman, Yaseer Arafat Durrani</i>	49
10	SELTHA: Secure, Efficient and Lightweight Authentication Mechanism for unmanned Aerial Vehicle Network <i>Waqas Salam, Syed Khaliq-ur-Rehman Raazi, Nauman Hafeez Ansari</i>	56
11	12 Element Inverted E-Shaped Massive MIMO Antennas for Future 5G Smartphone Applications <i>Mumtaz Ahmed, Zain Zafar, Ilsa Javed, Muhammad Zahid, Yasar Amin</i>	63
12	Fault Detection and Quality Inspection of Printed Circuit Board Using Yolo-v7 Algorithm of Deep Learning <i>Karim Kolachi, Malhar Khan, Shahjahan Alias Sarang, Aaqib Raza</i>	68
13	A Hybrid Statistical Model for Ultra Short Term Wind Speed Prediction <i>Maria Ashraf, Bushra Raza, Maryam Arshad, Ali Ahmed, Syed Sajjad Haider Zaidi</i>	75
14	An Effective Approach for Violence Detection using Deep Learning and Natural Language Processing <i>Versha Kumari, Khuhed Memon, Burhan Aslam, Bhawani Shankar Chowdhry</i>	83
15	A Comprehensive Study of the Role of Self-Driving Vehicles in Agriculture: A Review <i>Ameer Hamza, Faisal Riaz, Samia Abid, Umar Raza, William Holderbaum, Bhawani Shankar Chowdhry</i>	91
16	A machine-learning-based Intrusion detection for IIoT infrastructure <i>Sameer Aftab, Zafi Sherhan Shah, Sajjad Ali Memon, Quratulain Shaikh</i>	98
17	Praise or Insult? Identifying Cyberbullying Using Natural Language Processing <i>Nimra Tariq, Zafi Sherhan Syed, Erum Saba</i>	104
18	Inductance Enhancement Using Nested Inductor Topology for RF and Voltage Regulators Applications <i>Wesam Khalil, Muhammad Ayaz, Kiran Nadeem</i>	111

19	Enhanced Respiratory Tract Auscultation Audio Signal Classification Technique Employing LSTM and RNN <i>Ihtisham Ul Haq, Mehran Ahmad, Hamza Ahmad Khan</i>	115
20	Comparison of Memory-less and Memory-based Models for Short-Term Solar Irradiance Forecasting <i>Ubaid Ahmed, Ahsan Raza Khan, Sohail Razzaq, Anzar Mahmood</i>	121
21	Modeling and Control of Liquid Carrying Aerial Vehicle's Endurance and Performance Based on LQR And PID Control Strategies <i>Syed Muhammad Nashit Arshad, Khawaja Fahad Iqbal, Yasar Ayaz, Noman Naseer, Sara Ali</i>	127
22	Exploring the Impact of False Location Identification on the Inference of Social Ties in Location-Based Social Networks <i>Aqeel Ahmed, Xianghong Lin, Ali Arshad, Khalil Ur Rahman, Nauman Ali Khan</i>	133
23	A Comparative Study of the Performance of Real time databases and Big data Analytics Frameworks <i>Syed Muhammd Nabeel Mustafa, Josph Peter Terence Noronha, Muhammad Umer Farooq, Syeda Sundus Zehra</i>	139
24	Design of Phased Array Antenna System for LoRa Applications <i>Hafsa Talpur, Badar Muneer, Faisal Karim Shaikh, Umair Ahmed Korai</i>	146
25	Myocardial D-Spect Image Segmentation Using RSF Model and Kernal Difference Operator <i>Humna Tahreem Awan, Shahnawaz Talpur, Asif Aziz Memon</i>	150
26	Advancement Of Sign Language Recognition Through Technology Using Python and OpenCV <i>Aneesh Pradeep, Mukhammadkhon Asrorov, Muxlisa Quronboyeva</i>	156
27	Touch Gesture Recognition using Chipless RFID Technology <i>Ammarah Altaf, Humayun Shahid, Yasar Amin, Muhammad Zahid</i>	163
28	Leveraging Data Science to Advance the United Nations Sustainable Development Goals <i>Aneesh Pradeep, Zulfiya Muytenbaeva</i>	168
29	A Transformer-based approach for Fake News detection using Time Series Analysis <i>Aniq ur Rahman, Hassan Nazeer Chaudhry, Malik Muhammad Asim, Farzana Kulsoom</i>	174
30	A robust Carrier Frequency and Timing Offset Estimation in Inter-UAV OFDM Communication Links <i>Farzana Kulsoom, Iraj Fatima, Hassan Nazeer Chaudhry, Aneeqa Gul, Adeel Akram</i>	181
31	BER Analysis of 5G Antennas and Modulation Schemes using UFMC <i>Waleed Shahjehan, Irshad Hussain</i>	186
32	Enhancing Contextualized GNNs for Multimodal Emotion Recognition: Improving Accuracy and Robustness <i>Muhammad Huzaifa Shahbaz, Zain-Ul-Abidin, Khalid Mahboob, Fayyaz Ali</i>	192
33	ECG Signals Analysis based on Compressed Sensing and Learning Techniques for Heart Disease Recognition <i>Bharat Lal, Qimeng Li, Raffaele Gravina, Pasquale Corsonello</i>	199
34	Investigating the Suitability of Ceramic Insulators for Coastal Power Distribution System in Pakistan Using Accelerated Aging Technique <i>Abdul Attayyab Khan, Basit Ali, Mirza Waqas Baig, Jawad Ahmed Bhutta, Azeem Azam</i>	206