

2023 20th Learning and Technology Conference (L&T 2023)

**Jeddah, Saudi Arabia
26 January 2023**



**IEEE Catalog Number: CFP23B33-POD
ISBN: 979-8-3503-0031-4**

**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:	CFP23B33-POD
ISBN (Print-On-Demand):	979-8-3503-0031-4
ISBN (Online):	979-8-3503-0030-7

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

**Paper Session 1
METAVERSE**

Embracing the Metaverse The Future of Islamic Teaching and Learning (700)
Biliana Popova1-7

Mapping the Scientific Landscape of Metaverse Using VOSviewer and Bibliometric (7714)
Tayeb Brahimi and Hala Haneya8-13

The Redefinition of mHealth Applications in Metaverse (5931)
Passent Elkafrawy, Leena Alam, Joud Alfarra, Hajer Abbas and Mehreen Junaid14-19

Non-Invasive BCI by using EMD and Machine Learning: A Metaverse Interaction Perspective (6326)
Mirnal Ali, Nouf Alsaedi and Saeed Mian Qaisar20-25

Activity Provenance for Rights and Usage Control in Collaborative MR using Blockchain (6483)
Muhammad Shoaib Siddiqui26-31

Using Augmented reality to improve nutritional educational for type 1 diabetic children and adolescents:
Quantitative study of patient knowledge retention (3437)
Norah Alshebil, Khulud Alkadi, Nagarajkumar Yenugadhathi and Dr.Mohammed Aldubaiee32-36

Understanding Blockchain technology in Islamic social finance and its opportunities in metaverse (6417)
Sherin Kunhibava, Aishath Muneeza, Zakariya Mustapha and Maryam Khalid37-41

**Paper Session 2
TECHNOLOGY AND MACHINE LEARNING/BLOCKCHAIN**

Predicting COVID-19 Mortalities for Patients with Special Health Conditions Using an Agent-Based Model (5689)
Erika Mazurkiewicz, Sahar Al Seesi and Amal Abdel-Raouf42-47

A Decentralised Instant Messaging Application with End-to-End Encryption (4836)
Dev Mashru, Ganesha Maruthi Mangipudi, Harivardhan Swamy, Shivakumar Halangalli and Sushma E48-53

AI-Based Use-Pattern Generative Spaces for Indoor and Outdoor Activities (3087)
Sammar Allam54-58

Blockchain in Healthcare for Achieving Patients' Privacy (4357)
Esraa Elgamal, Walaa Medhat, Mohamed Abd Elfatah and Nashwa Abdelbaki59-64

An Approach for Detecting Missed Tissue Proteins in Autoimmune Diseases (7147)
Rasha Elnemr, Mahmoud Rafea and Passant Elkafrawy65-68

Blockchain Application on Big Data Security (9179)
Esraa Elgamal, Walaa Medhat, Mohamed Abd Elfatah and Nashwa Abdelbaki69-73

Detection of Hydrogen Leakage Using Different Machine Learning Techniques (1554)
Mohammed F. El-Amin74-79

Machine Learning Prediction for Nanoparticles Behavior in Hydrocarbon Reservoirs (3182)
Mohammed F. El-Amin, Budoor Alwated80-83

**Paper Session 3
TECHNOLOGY & ENGINEERING**

Design and Optimization of PID Controller based on Metaheuristic algorithms for Hybrid Robots (6821)
Rabab Hamed M. Aly, Kamel Hussien Rahouma and Aziza I. Hussein85-90

Optimizing energy efficiencies of IoT-based wireless sensor network components for Metaverse sustainable development using Carry resist adder based Booth recoder (CRABRA) (563)
Charles Rajesh Kumar James Paulraj and M.A Majid91-96

Adaptive Optics Rotational Design and Electro- Magnetic Actuation (1255)
Ammar Alzaydi97-102

Electrical Vehicle Model Assessment Using UDDS NYCC and WLTP Drive Cycles (7770)	
Lina Almatrafi, Salma Badaam and Saeed Mian Qaisar	103-108
Self-Balancing System and Control Design for Two-Wheeled Single-Track Vehicles (7359)	
Ammar Alzaydi	109-113
Solid-State 3D Models of Lumbar Vertebral Segments (6743)	
Volodymyr Mavrych, Olena Bolgova, Inna Shypilova and Anton Eryomin	114-119
A Machine learning-driven IoT architecture for predicting the growth and trend of Covid-19 epidemic outbreaks to identify high-risk locations (1522)	
Charles Rajesh Kumar James Paulraj, Mary Arunsi Bernard and M. A. Majid	120-127
Design of a DC/DC Converter with a PID Controller and Backpropagation Neural Network for Electric Vehicles (7563)	
Aziza I. Hussein, Basmah Shigdar, Lina Almatrafi, Batool Alaidroos, Futoon Alsharif, Rabab Hamed M. Aly	128-133
Efficient Tradeoff between Throughput and Energy Efficiency of Massive-MIMO Technique for Satellite Communication applications (3485)	
Aziza I. Hussein, Ibrahim Salah, Kamel Rahouma and Mohamed Mourad	134-139

Paper Session 4
TEACHING AND LEARNING

Malscanner – File Behavior Analysis using Machine Learning (5900)	
Basil Abdulrahman, Abdulrahman Qanadeely, Omar Al-Ghamdi, Nawaf Al-Sukaibi, Abdulaziz Al-Hassan and Nazar Abbas Saqib	140-144
Tailoring Arduino for Interactive Digital Fabrication: Mechanism, Algorithms, Cases (9909)	
Sammar Allam and Sema Alacem	145-150
The Future Metavertainment Application development (9789)	
Layal Ghryani, Aichetou Mohamed Sidiya, Hanin Alzaher and Razan Almahdi	151-156
Automatic Detection and Analysis of Tajweed Rules (9228)	
Dalia Omran, Sahar Fawzi and Ahmed Kandil	157-160
A Survey on BERT and Its Applications (5934)	
Sulaiman Aftan and Habib Shah	161-166
Arabic English Speech Emotion Recognition System (8333)	
Sahar Fawzi and Mai El Seknedi	167-170
A proposed Array of Quadrifilar Helix Antenna for CubeSat applications (1269)	
Nur Ad-Din Salem, Aziza I. Hussein and Mohamed Mourad	171-175
The Usefulness of Teaching Technology Toolkit (3T) in Selecting Appropriate Learning Tools for an Engaging Online Learning Solution (3792)	
Fareeza Marican Abu Backer Maricar, Mohd Fadzil Zainal Anuar, Marlina Omar Bakhi, Hasnain Zafar Baloch	176-178
Data Mining and Visualization of Space Technology Research Trends in the Arab World	
Tayeb Brahimi	179-183
Covid -19 Social Distance Analysis Using Machine Learning	
Saja Alsulami, Duha Alghamdi, Shahad BinMahfooz, Kawthar Moria	184-189