

# **2023 IEEE Tenth International Conference on Communications and Networking (ComNet 2023)**

**Hammamet, Tunisia  
1-3 November 2023**



**IEEE Catalog Number: CFP2308I-POD  
ISBN: 979-8-3503-8172-6**

**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:	CFP2308I-POD
ISBN (Print-On-Demand):	979-8-3503-8172-6
ISBN (Online):	979-8-3503-8171-9
ISSN:	2163-663X

**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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

CURRAN ASSOCIATES INC.  
**proceedings**  
.com

# TABLE OF CONTENTS

## **SESSION 1: DEEP LEARNING - MACHINE LEARNING**

Predicting Sentiment Analysis for Web Users with a Deep Learning Approach .....	1
<i>Nawres Abdelwahed, Asma Ben Letaifa, Azer Ksouri</i>	
Automated Malware Detection Based on a Machine Learning Algorithm .....	12
<i>Almaha Almuqren, Mounir Frikha, Abdullah Albuali</i>	
Exploring the Impact of Speech AI: a Comparative Analysis of ML Models on Arabic Dataset .....	24
<i>Mohamed Khaled Ben Mna, Asma Ben Letaifa</i>	
Contactless Breathing Waveform Detection Through RF Sensing: Radar Vs. Wi-Fi Techniques .....	32
<i>Umer Saeed, Dingchang Zheng, Behzad Ali Shah, Syed Ikram Shah, Sana Ullah Jan, Jawad Ahmad, Qammer H. Abbasi, Syed Aziz Shah, Wadii Boulila</i>	

## **SESSION 2: CLOUD/EDGE/INTENT NETWORKING**

A Trust-Based Algorithms for Securing IoT Clusters in an Edge Computing Environment .....	42
<i>Nadia Kammoun, Aida Ben Chehida Douss, Ryma Abassi</i>	
Traffic Prediction of a Mobile EDGE Network Using Time Series Models: Case of MTN Benin .....	48
<i>Mahugnon Géraud Azehoun Pazou, Régis Donald Hontinfinde, Raïssa Tchibozo Houessou, Aurel Agbodoyetin, Jean-Louis Comlan Fannou, Christian Akowanou</i>	
Context Aware Life Cycle for Intent-Based Networking Systems .....	58
<i>Yosra Abassi, Nabil Tabbane</i>	

## **SESSION 3: ML & HEALTH CARE**

A Comparative Study of Machine Learning Techniques for Early Prediction of Prostate Cancer .....	66
<i>Mowafaq Salem Alzboon, Mohammad Al-Batah, Muhyeeddin Alqaraleh, Ahmad Abuashour, Ahmad Fuad Bader</i>	
A Comparative Study of Machine Learning Techniques for Early Prediction of Diabetes .....	78
<i>Mowafaq Salem Alzboon, Mohammad Al-Batah, Muhyeeddin Alqaraleh, Ahmad Abuashour, Ahmad Fuad Bader</i>	
Lung Cancer Detection and Classification Using CNN and Image Segmentation .....	90
<i>Dorsaf Hrizi, Khaoula Tbarki, Sadok Elasmi</i>	

## **SESSION 4: IOT/RF/HPA SYSTEMS**

Rectenna Circuits for Energy Harvesting: Recent Trends and Developments for IoT Deployment.....	100
<i>Ejbeli Marwa, Hayouni Mouhamed, Choubani Fethi</i>	
Performance Versus Complexity Study for Joint Polar Coded HPA Systems .....	108
<i>Hizem Moez, Abidi Imen, Cherif Maha, Bouallegue Ridha</i>	

## **SESSION 5: 5G, COMMUNICATION SYSTEMS & POWER CONSUMPTION**

5G Vs Wifi6 Downlink Power Consumption Comparison for Teleworking Use Case .....	114
<i>Mohamed Yassine Hentati, Tijani Chahed, Philippe Ciblat, Marceau Coupechoux, Sameh Najeh</i>	
Adaptive UCB MAB Algorithm for Optimizing Relay Selection in Narrowband Power Line Communication .....	123
<i>W. Belhaj Sghaier, H. Gassara, F. Rouissi, F. Tlili</i>	
Multi-User Generic Channel Equalization and Sources Separation for MIMO Communication Systems.....	129
<i>Chouaib Farhati, Souhaila Fki, Abdeldjalil Aïssa-El-Bey, Fatma Abdelkefi</i>	
Machine Learning: a New Way for Material Resources Orchestration in a Large-Scale V-RAN .....	134
<i>Mihia Kassi, Soumaya Hamouda</i>	

### **Author Index**