

2021 5th International Conference on Internet of Things and Applications (IoT 2021)

**Isfahan, Iran
19 – 20 May 2021**



**IEEE Catalog Number: CFP21JVG-POD
ISBN: 978-1-6654-4449-1**

**Copyright © 2021 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:	CFP21JVG-POD
ISBN (Print-On-Demand):	978-1-6654-4449-1
ISBN (Online):	978-1-6654-4448-4

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

2021 5th International Conference on Internet of Things and Applications (IoT)

Table of Contents

Paper Title	Page
Distributed Rule Anomaly Detection in SDN-based IoT Rasool Kiani, Ali Bohlooli	1
MRMC-CAN: A Method to Improve Real-Timeness and Response Time of CAN Ismail Ghodsollahee, Yasser Sedaghat	7
Ranking Resilience Events in IoT Industrial Networks Maryam Nooraei Abadeh, Mansooreh Mirzaie	15
A Survey on Deep Learning Applications for Electric Vehicles in Micro Grids Pooya Tahmasebi Zadeh, Maryam Joudaki, Alireza Ansari	20
Provision of a Recommender Model for Blockchain-Based IoT with Deep Reinforcement Learning Elnaz Rabieinejad, Shahriar Mohammadi, Mahdi Yadegari	26
Smart Urban Management and IoT; Paradigm of E-Governance and Technologies in Developing Communities Mahdi Suleimany	34
Information Gathering of Earthquake Disasters by Mobile Crowd Sourcing in Smart Cities Hamed Vahdat-Nejad, Hamid Bahadori, Ali Abiri	40
Using the Cuckoo Algorithm to Optimizing the Response Time and Energy Consumption Cost of Fog Nodes by Considering Collaboration in the Fog Layer Shakoor Vakilian, Seyed Vahid Moravvej, Ali Fanian	46
Improving Multi-floor WiFi-based Indoor positioning systems by Fingerprint grouping Komeil Shah Hosseini , Mohammad Hadi Azaddel, Mohammad Amin Nourian, Ahmad Akbari Azirani	51
Multi-objective Smart Distribution Network Operation considering Demand Response Programming Mohammad Ali Lasemi, Foad Najafi, Ahmad Arabkoohsar	57

2021 5th International Conference on Internet of Things and Applications (IoT)

Paper Title	Page
Performance Analysis of Decoupled UL/DL User Association in Wireless-Powered Massive MIMO-Aided Heterogeneous Networks Sepideh haghgoy, Mohammadali Mohammadi, Zahra Mobini	63
Scalability Analysis of a LoRa Network Under Co-SF and Inter-SF Interference in Large-scale IoT Applications Solmaz Mohammadi, Gholamreza Farahani	70
A New Fast Framework for Anonymizing IoT Stream Data Ali Reza Sadeghi Nasab, Hossein Ghaffarian	76
Filter Based Time-Series Anomaly Detection in AMI using AI Approaches Alireza Rahimi, Afshin Shahrestani, Sina Ramezani, Pedram Zamani-Soroush Omidvar Tehrani, Mohammad Hossein Yaghmaee Moghadam	81
The role of the Internet of Things in the Educational System during the Corona Pandemic Mohammad Karimi Moridani	87
A Decentralized Method for Detecting Clone ID Attacks on the Internet of Things Saeid Rafiei Taghanaki, Shohreh Behnam Arzandeh, Ali Bohlooli	92
Sensing, Wireless Transmission, and Smart Processing of Heart Signals Erfan Mansoori, Alireza Siavashi, Mahdi Majidi	98
Anomaly detection in Internet of Things using feature selection and classification based on Logistic Regression and Artificial Neural Network on N-BaIoT dataset Fereshteh Abbasi, Marjan Naderan, Seyed Enayatallah Alavi	104
IoT Performance Improving for Indoor and Outdoor Environments Morteza Shafiee Neyestanak, Ehsan Azizi, Elham Salarpour	111
An IoT-Fog-Cloud Framework for Demand Side Management in Smart Grid Yasin Boloorchi, Sadoon Azizi	117
IoT based smart surveillance monitoring by using model-based human action recognition design Amir Reza Ebrahimi, Ahmad Reza Naghsh-Nilchi, Amirhassan Monadjemi, Mohammad Saeed Ehsani	123