CALL FOR BOOK CHAPTERS

Taylor & Francis
Taylor & Francis Group

Intelligent Wireless Sensor Networks and the Internet of Things: Algorithms,Methodologies, and Applications

Part of Book series:

Wireless Communications and Advancements

Recent developments in wireless communications and computer networks now have a new computation and communication technology as Wireless Sensor Networks (WSNs) and Internet of Things (IoTs). Design and development of intelligent, adopted, and automated models for the progress of WSNs and IoTs performances is one of the foremost challenging issues. Due to the continuous increase in IoT devices, the massive amount of network data needs to be stored securely and processed quickly for real-world appliances. These requirements attract the Artificial Intelligence (AI), Machine Learning (ML), and Deep Learning (DL) approaches to implement effective and efficient systems. Most real-time IoT- related schemes like drones, smart healthcare devices, automatic driving and traffic lights, and security robots extremely depend on ML and DL-based technologies, which are boosted with the augmentation of hardware skills. However, both ML/DL algorithm-based appliances still have worries about precision than strict time requirements those are discussed in this book.

As the technology moves forward, WSNs are altered in tremendous shades. Nevertheless, the implementation of quantum technology in WSN has not yet been systematically studied. In addition, Cryptography and Blockchain bring significant advancements in securing the sensed data; in particular, Blockchain technology uses in IoT due to its most straightforward and secure computation complexities. Adopting existing solutions is also required to develop and improve communication in 5G and 6G technologies. Hence, this book aims to capture all the multifaced nature of WSNs, IoT, AI, ML, and DL in one single place.

TABLE OF CONTENTS (but not limited to)

- Detailed Introduction to IoT and WSN concepts and Developments.
- A Deep Dive into Smart and Adaptive Wireless Sensor Networks
- Impact and Advances of AI, ML, and DL in the Internet of Things standards
- Intelligence-based techniques for Localization, Coverage, and Connectivity issues in WSNs, IoTs
- Nature-inspired, Computational intelligence algorithms for Smart WSNs.
- Smart Energy Management, Resource allocation, and Optimization techniques in WSNs, IoTs
- ML, and DL-based intelligent Data Analysis models, and Routing protocols
- Role of Deep Learning techniques in decision making
- IoT in pharmaceutical sciences and disease tracking
- Intelligent computing algorithms for intelligent wearable healthcare devices
- Security considerations smart appliances using ML and DL
- Advance Cryptographic techniques for WSNs and IoT Security
- Blockchain Technology in Smart WSNs and IoT industry applications
- Chances of Quantum Cryptography in WSNs, IoTs
- Effective ML, DL-based wireless communication approaches in 5G, 6G Networks
- Challenges and future research directions of 5G and 6G
- Case Study: Anomaly and Intrusion detection in WSNs and IoT

Important Dates

- **One page Abstract with title and table of contents** **10-11-2022**
- **Abstract acceptance/rejection notification** **15-11-2022**
- **Full chapter submission** **28-02-2023**
- **First review notification** **20-03-2023**
- **First review submission** **20-04-2023**
- **Acceptance notification** **20-05-2023**
- **Camera Ready submission** **10-06-2023**

General Guide Lines

- Each abstract must be in the range of 250-300 words with table of contents. Each chapter must have minimum 25 pages or minimum 7000 words double-spaced.
- There is no publication and processing charges. The book shall be submitted to major abstract and indexing Scopus

Link for Easychair submissions

https://easychair.org/conferences/?conf=intelligentwsn2023

EDITORS

Dr. Bhanu Chander
Department of Cyber Security,
IIIT Kottayam, India,
bhanu@iiitkottayam.ac.in

Dr. Koppala Guravaiah,
Computer Science & Engineering,
IIIT Kottayam, India,
kguravaiah@iiitkottayam.ac.in

Kumaravelan Gopalakrishnan
Associate Professor, Department of Computer Science and Engineering,
Pondicherry University, Pondicherry – 605014.

Dr. Anoop B N
Postdoctoral Research Fellow, Glenn Biggs Institute for Alzheimer's Neurodegenerative Diseases, UT Health San Antonio, US

ALL QUERIES SHOULD BE FORWARDED TO: bhanu@iiitkottayam.ac.in