

New Frontiers in IoT and Cloud Computing for Post-COVID-19 Era

Call for Book Chapters

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Website: <http://lalitgarg.weebly.com/new-frontiers-in-iot-and-cloud-computing-for-post-covid-19-era.html>

Submission link: <https://easychair.org/conferences/?conf=iotandcloudcomputing>

Introduction

COVID-19 pandemic has significantly changed our lives. Countries are introducing social distancing measures, including lockdown, to avoid the spread of infection. Organisations are implementing new ways of continuing their business by facilitating work from home and avoiding contacts using the Internet of Things (IoT) for remote monitoring. Schools and other educational institutes are implementing e-learning. Hospitals and health organisations are also using e-medicine and remote patient monitoring utilising Internet of Medical Things (IoMT). Online shopping, contactless delivery and virtual social events are becoming popular. Authorities are using sensors for contact tracing, traffic control and safety. Thanks to secure and reliable cloud infrastructure to make these applications possible. Cloud computing and IoT are becoming ever more essential in the post-COVID-19 era. However, security, privacy, reliability, sustainability, performance, user experience, power requirements, management and compliance are some of the challenges, cloud and IoT based applications are facing. Researchers, developers and practitioners need to develop solutions to address these challenges.

Objectives

The primary objective of this book is to provide an account of the latest developments in IoT and cloud computing, and their practical applications in various industrial, scientific, business, education, and government domains in the post-COVID-19 era. The book also aims to identify challenges and their solutions, shaping the direction for future research and offer emerging topics to investigate further in the post-COVID-19 age. We expect the book to serve as a reference for a broader audience such as researchers, application designers, solution architects, teachers, graduate students, enthusiasts, practitioners, IT managers, decision-makers and policymakers.

Topics of Interest

Topics for potential chapters include, but are not limited, to:

1. IoT technology and infrastructure

Wireless sensor networks in the post-COVID-19 era
IoT Platforms
IoT infrastructure
IoT architecture
IoT data processing and intelligence
Cyber-Physical Systems in the post-COVID-19 era
IoT data management
IoT testing

4. Cloud technology and infrastructure

Edge computing
Fog Computing
Resource pooling
Service deployment
Cloud resource management
Virtual desktop infrastructure
Server virtualisation
Storage virtualisation

IoT data analytics

2. IoT applications

Internet of Medical Things (IoMT)
Internet of Everything (IoE)
IoT applications in healthcare
IoT applications in the supply chain
IoT applications in the automotive industry
IoT applications in smart retail
IoT applications smart cities
IoT applications in smart grids
IoT wearables

3. IoT challenges and solutions

IoT security in the post-COVID-19 era
IoT Privacy in the post-COVID-19 era
Performance of IoT applications
Ethical issues in IoT applications
Sustainability of IoT infrastructure
Scalability in IoT
Reliability in IoT in the post-COVID-19 era
IoT applications maintenance
IoT applications integration and compatibility
The energy efficiency of IoT devices and applications
Interoperability in IoT

Network virtualisation

5. Cloud computing applications

IoT as a service (IoTaaS)
Sensing as a service
Anything as a service (AaaS)
Data as a service (DAAS)
Software as a service (SaaS)
Platform as a service (PaaS)
Infrastructure as a service (IaaS)
Network as a service (NaaS)
Health cloud

6. Cloud computing challenges and solutions

Cloud computing security
Cloud computing privacy issues
Reliability in cloud computing
Quality of Service in cloud computing
Cloud performance management
Scalability in cloud computing
Downtime in cloud computing
Vendor lock-in
Cloud interoperability and portability
Cost management and containment
Cloud compliance

Important Dates

We plan to follow the timeline given below:

- Proposal deadline: August 15, 2020 (Early expression of interest is highly encouraged)
- Notification of proposal acceptance: August 30, 2020
- Full draft chapter submission: September 30, 2020
- Chapter review report to authors: October 30, 2020
- Final version submission: November 15, 2020

Early submission is highly appreciated as the editors would like to have progressive dialogue and work with prospective authors to bring out a book of broad appeal.

If we receive more than one proposal for a chapter on the same topic, the editors may request authors to collaborate to develop an integrated chapter.

Chapter Proposal submission

You are invited to submit a 1-2 pages proposal describing the topic of your chapter with a short abstract (200-400 words), the chapter organisation, anticipated number of pages in the final manuscript and brief biography of authors.

Manuscript Submission

Each accepted chapter should have about 20-35 A4 pages. We expect to deliver CRC of the book to the publisher. An MS Word template will be provided later.

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