Handbook of Large-Scale Distributed Computing in Smart Healthcare

Call for Book Chapters

Conventional healthcare services have seamlessly been integrated with pervasive computing paradigm and consequently cost-effective and dependable smart healthcare services and systems have emerged. Currently, the smart healthcare systems use Body Area Networks (BANs) and wearable devices for pervasive health monitoring and Ambient Assisted Living. The BANs use smartphones and several handheld devices to ensure ubiquitous access to the healthcare information and services. However, due to the intrinsic architectural limitations in terms of CPU speed, storage, and memory, the mobile and other computing devices seem inadequate to handle huge volumes of sensor data being generated unceasingly. In addition, the sensor data is highly complex and multi-dimensional. Therefore, integrating the BANs with large-scale and distributed computing paradigms, such as the cloud, cluster, and grid computing is inevitable to handle the processing and storage needs. Moreover, the contemporary research efforts mostly focus on health information delivery methods to ensure the information exchange within a single BAN. Consequently, the efforts have been very limited in interconnecting several BANs remotely through the servers.

This book aims to consolidate the myriad research efforts pertinent to the large-scale distributed computing, smart healthcare systems, and Internet-of-Things (IoT) for healthcare. Topics of interest include but are not limited to:

- Large-scale Ambient Assisted Living (AAL) systems
- Scalable and context-aware remote health monitoring services
- M2M Communication methodologies and standards for large-scale smart health Systems
- Energy efficiency and Quality of Service (QoS) issues in large-scale smart healthcare systems
- Trust, safety, security, and privacy in large-scale distributed BANs
- Wearable and implantable computing in large-scale distributed healthcare systems
- Big data enabled m-health applications and reduction methodologies for smart healthcare
- Connected health and Internet of Things (IoT)
- Agent-based epidemic control services using distributed computing
- Large-scale patient-centric smart healthcare architectures
- Activity recognition methods for rehabilitation
- Predictive patient monitoring using large-scale systems
- Resource allocation techniques for large-scale BANs
- Mobile cloud computing for emergency medical services
- Large-scale medical image analysis for real-time disease screening
- Machine learning models for multidimensional sensor data
- Resource interoperability, technological, and social implications of distributed smart health systems
- Smart healthcare solutions for developing countries
- Simulation-based methods for smart healthcare environments to support independent living
- Case studies on connected health systems

Submission Guidelines

- All of the contributions must be submitted through **EasyChair** conference system via the following link: https://easychair.org/conferences/?conf=ldshbook16
- Each book chapter must:
  - be typeset on a letter size paper with 1.25” margins all-around.
  - preferably use single-line spacing and Times New Roman as the fonts with a minimum size of 11pt.
  - not exceed the page limit of 40.
  - contain at least four (04) illustrations.
- Book chapter drafts can be produced using any of the following:
  - (Word, TeX, Open Office).

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