

### **AIM & SCOPE:**

Over the last decade, the Internet of Things (IoT) had impressive growth and became the new direction of information technology. Also, the energy consumption has reached distressing rates due to the large scale of digital context, a number of subscribers, and the number of smart devices. By capturing and processing sensitive information in human life, the IoT devices and cloud data centers are increasing energy consumption with a high carbon emission phenomenon. In the IoT ecosystem, intelligent applications require to select smart devices with low energy consumption and battery-saving because all smart devices have limited battery life and may lead to disconnect data transmission. However, it is challenging to design a fully optimized framework due to the interconnected nature of smart devices with different technologies.

On the other hand, green energy-efficient computing has become a potential research focus in the IoT environment. Finally, energy consumption techniques are incoming a more advanced stage in the IoT communications. Also, green energy efficient techniques can use on-demand protocols, machine learning, deep learning, and artificial intelligence methods to manage cost-effective and power-saving methods on smart devices in IoT communications. To this point, green energy-efficient computing solutions in IoT systems have emerging efforts and high potential to evaluate the critical points and safety conditions. The goal of this special issue is to highlight the latest research focusing on green energy-efficient computing solutions in IoT systems to address the challenges and critical points. We also aim to invites researchers to publish selected original articles presenting intelligent trends to solve new challenges of new problems. We are also interested in review articles as the state-of-the-art of this topic, showing recent major advances and discoveries, significant gaps in the research, and new future issues.

### **LIST OF POTENTIAL TOPICS INCLUDE, BUT ARE NOT LIMITED TO:**

- Green energy harvesting methods in IoT communications
- Blockchain technique for energy-efficient IoT communications
- Energy-aware service composition and allocation techniques in IoT
- Energy-efficient techniques for VANET topologies in IoT
- Energy-efficient machine learning techniques in IoT
- Deep learning on green computing in IoT communications
- Formal verification energy-efficient IoT communications
- Energy-efficient techniques on cloud-edge service management in IoT communications
- Energy-aware scheduling and offloading solutions in IoT communications
- Energy-efficient routing protocols in IoT communications
- State-of-the-art of energy consumption management in IoT communications
- Energy-efficient techniques for industrial and manufacturing systems in IoT communications
- Energy-efficient techniques for smart city and Urban computing in IoT communications
- Security and privacy methods applied in green computing solutions in IoT communications
- Reliability-aware green computing methods in IoT communications
- Smart data security and interoperability in green IoT communications
- Anomaly detection solutions for energy-efficient computing in IoT communications
- Quality of Experience (QoE) in green IoT communications
- Future Internet demands using the communication of IoT devices

### **SUBMISSION GUIDELINES:**

We welcome the novel, unpublished and state-of-the-art research manuscript submissions which do not remain under consideration in any other journal. Submission to this special issue should be made only on the IJCS journal's online manuscript submission portal [<http://mc.manuscriptcentral.com/ijcs>] and in the submission process authors are instructed to select the manuscript type as “**Green energy-efficient in IoT**”. Paper submissions must confirm to the layout and format guidelines in the International Journal of Communication Systems. Instructions for Contributors are in: [<https://onlinelibrary.wiley.com/page/journal/10991131/homepage/forauthors.html>].

### **PROPOSED SCHEDULE:**

- Manuscript submission deadline: 10th February 2021
- First notification of status: 15th March 2021
- Final manuscript due: 30th June 2021
- Tentative publication date: Q3, 2021 (TBA by the Editor-in-Chief)

### **GUEST EDITORS:**

**Dr. Alireza Souri**, Department of Computer Engineering, Islamic Azad University, Iran, [a.souri@srbiau.ac.ir](mailto:a.souri@srbiau.ac.ir)

**Prof. Vincenzo Piuri**, Dipartimento di Information, University of Milan, Italy, [vincenzo.piuri@unimi.it](mailto:vincenzo.piuri@unimi.it)

**Dr. Mohammad Shojafar**, 5G Innovation Centre, Institute for Communication Systems, University of Surrey, UK [m.shojafar@surrey.ac.uk](mailto:m.shojafar@surrey.ac.uk)

**Dr. Eyhab Al-Masri**, School of Engineering and Technology, University of Washington Tacoma, USA, [ealmasri@uw.edu](mailto:ealmasri@uw.edu)

**Dr. Saru Kumari**, Department of Mathematics, Ch. Charan Singh University, Meerut, India [saryusiirahi@gmail.com](mailto:saryusiirahi@gmail.com)