Advancements and Trends in Green Computing & Communication

Special Thematic Issue for “Recent Patents in Computer Science”

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Aim and Scope

Computer networks, communication systems, and other IT infrastructures have affected environment adversely due to excessive power consumption, increasing greenhouse gas emissions, and leading to pollution during the production and disposal. To address these issues and to create a sustainable environment, new energy models, algorithms, methodologies, platforms, tools and systems are required to support next-generation computing and communication networks. Thus, Green computing and communications solutions, designed with more renewable energy, higher energy efficiency, lower greenhouse gas emission, and less harmful materials, are seeking more attention these days. It deals with the methods of utilizing computers in ecological well-disposed way.

This special issue will focus on solutions for all aspects of green computing such as energy efficiency, carbon footprint reduction and cooling management as well as green communication concept in diverse fields. The trade-offs between energy efficiency and performance have become key challenges that must be addressed in both, distributed and traditional performance-oriented infrastructures in order to be more productive and energy efficient, for shaping a "Green" world in the future. In this context, there is a dire need to find out new innovative methods/technologies to reduce energy consumption for better environment. Thus, Green Computing and Communication technologies have been recognized recently by the researchers worldwide, still many challenges remain to be addressed.

The objective of this special issue is to bring together the leading researchers and developers from both academia and industry to discuss and present their high-quality research papers on Green computing and communication. All submissions should neither have been published previously nor be currently under consideration for publication elsewhere. The submitted papers will undergo a strict peer review based on originality, quality, and relevance to this special issue and the journal.

Suggested Topics of Interest include, but not limited to:

- Green smart computing
- Green cloud computing
- Green Computing Techniques for Wireless Sensor Networks
- Sensors for green computing
- Green and Energy-Efficient Cloud Computing
- Ultra-low power systems architectures
- Energy harvesting, storage, and recycling
- Energy-efficient M2M communications, networking and protocols
- Energy efficient wireless networks and vehicular networks
- Measurement and analytical modelling of energy consumption
- Energy-efficient techniques for 5G wireless communication systems
- Green smart devices for Internet of Things
- Low cost, energy-efficient antenna and RF designs
- Green network monitoring and measurements
- Green and sustainable communications and systems
- Self-organizing green wireless networks
- Experimental test-beds and results for green communications
- Cross-layer design and optimization for green communications and networking
- Green optical communications, switching, and networking
- Physical layer approaches for green communications
- Green techniques for smart highways and vehicular networks
- Signal processing for green communications
- Standardization, policy, and regulation for green communications and computing
- Energy harvesting/charging and power management
- Long-life sensor node deployment and topology control
- Energy-efficient communication protocol design
- Scheduling algorithms for sensor networks
- Energy-efficient sensing techniques for WSN
- Self-sustainable sensor networks
- Energy efficient Data routing, processing and storage strategies for WSN

Papers submitted for publication for this special issue will be peer reviewed and selected on basis of their quality and relevance to the theme of this special issue. Submitted manuscripts should not have been published previously, nor be under consideration for publication elsewhere.

A guide for authors and other relevant information for submission of manuscripts are available on the Instructions for Authors page (https://benthamscience.com/journals/recent-patents-oncomputer-science/author-guidelines/). Please submit your manuscripts via email to any of the one of guest editors and via JMS Control Panel.

**IMPORTANT DATES:**

- Manuscript Submission Deadline: 15th July, 2019
- Peer Review Due: 15th August, 2019
- Revision Due: 30th August, 2019
- Announcement of Acceptance by Guest Editor: 30th September, 2019
- Final Manuscript Due: 30th October, 2019
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There is no publication fee for publication in the special issue.

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