

## CALL FOR PAPERS

### *Special Issue on Energy Efficient Wireless Communication Networks with QoS*

#### *Scope*

Nowadays, we are witnessing a huge increase in the number of mobile subscribers, and also the forecast on the telecommunications market assumes an increase per subscriber's data rate and the roll out of additional base stations for next generation mobile networks. An undesired consequence is the growth of wireless networks' energy consumption that will cause an increase of the global carbon dioxide (CO<sub>2</sub>) emissions, and impose more and more challenging operational costs for operators. This has initiated the need to innovate in the field of energy efficient communications, as wireless network infrastructures as a whole have contributed a significant portion of the total carbon emission of a telecommunication system. As such, wireless networks can play an important role in helping to alleviate the global warming. Various energy efficient networking technologies can be designed to reduce power consumption. However, the effort of saving power and energy must not affect the service quality perceived by a user. It is a major challenge to be able to reduce power consumption and maintain good service quality at the same time.

This special issue is devoted to the recent progress on the advanced wireless networking technologies to achieve energy efficiency without compromising quality of service (QoS). We are particularly interested in wireless cellular networks, but innovative and novel works in other types of communication networks are also invited. Original major contributions on the design, analysis, implementation, demonstration, application and standardization of energy efficient wireless networking technologies with QoS will be considered for this special issue. By gathering the relevant cutting edge works, this special issue will identify the unique challenges and the efficient solutions in the area of energy efficient wireless networks with QoS.

#### *Topics*

Topics of interest include, but are not limited to:

- Green wireless network architecture design
- QoS aware energy efficient communication protocols and power management
- Energy efficient QoS routing protocols
- Physical layer techniques, channel/network coding for energy efficiency and QoS
- QoS aware energy efficient MAC protocols
- Energy efficiency in Internet of Things
- Energy efficiency and QoS in the backhaul network
- QoS in heterogeneous wireless networks
- QoS schemes in green wireless networks
- Algorithms for QoS aware energy efficient scheduling and resource management
- Cross-layer energy efficiency optimization
- Cooperation for energy efficiency with QoS provision
- Security in green mobile communication networks
- Power efficient operation in multihop wireless networks
- Energy efficient network selection
- QoS Power control in multi-hop wireless networks
- Virtualization techniques for energy efficiency and QoS
- Managing tradeoffs between energy efficiency and QoS
- Cooperative green communications with QoS

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- Self-organized network algorithms for energy efficiency and QoS
- Energy efficient signal processing for wireless communications
- Energy efficient and QoS dynamic network reconfiguration
- Cognitive techniques to control networking energy efficiency and QoS
- Optimization of energy efficient networking
- Energy harvesting techniques and strategies
- Power and energy consumption models for QoS aware wireless communications
- User mobility modelling to predict and adapt to patterns to reduce energy expenditure
- Future of green wireless multimedia networks

### *Instructions for Manuscripts*

Submitted articles must not have been previously published or currently submitted for journal publication elsewhere. Papers could be submitted to this special issue if they are substantially revised or improved and extended from their earlier versions with at least 33% new materials or results” as we do not encourage recycling conference papers in the journal.

Submissions must be directly sent via the IJCS submission web site at <http://mc.manuscriptcentral.com/ijcs> and select Special Issue: Efficient Wireless Communication Networks with QoS as manuscript type during step 1 of the submission process

Paper submissions must conform to the layout and format guidelines in the International Journal of Communication Systems. Instructions for Contributors are in: <http://www3.interscience.wiley.com/journal/5996/home/ForAuthors.html>

### *Important Dates*

Manuscript Due: July 21, 2014 (extended)

Notification of Acceptance/Rejection/Revision: September 20, 2014

Revised manuscript due: November 22, 2014

Final Manuscript Due: December 20, 2014

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