

Special Issue on  
**Advances in Green Communications Systems and Networks**

# CALL FOR PAPERS

Recent research has shown that around 4% of all of the carbon footprint generated by human activities which causes the global warming has its root in information and communication technologies (ICT) industries. This corresponds to about quarter of all car emissions and is roughly equal to all airplane emissions in the world. Research in ICT industries has shown that global mobile data traffic in 2017 will be 13 times that of 2012, where the most of it is due to superfast growing in development of smart phones and social networking.

Henceforth, to address the challenge of energy efficient and/or environmentally friendly communications and computing systems, new green techniques in physical layer design, new green protocols, and new green networking in communications systems and networks and especially in design of new cellular systems (e.g., 5G) must be taken into account. We invite researchers to contribute original research articles as well as review articles that address recent advances in green communications systems and networks.

Potential topics include but are not limited to the following:

- ▶ Theory, modeling, analysis, optimization, and performance of green and sustainable communication systems
- ▶ Architecture, algorithms, protocols, and scheduling for green communication systems
- ▶ Green communications in 5G systems
- ▶ Green wireless cellular networks
- ▶ Physical layer approaches for green communications
- ▶ Green optical communications, switching, and networking
- ▶ Green signal processing
- ▶ Quality-of-Service constraints
- ▶ Cognitive communications
- ▶ Smart grid green communications
- ▶ Cross-layer design and optimization for green communications and networking
- ▶ Green communications for Internet of Things
- ▶ Energy harvesting, storage, and recycling for green communications
- ▶ Standardization, evaluation, practice, measurement, policy, and regulation
- ▶ Applications of energy efficiency in communications and networking
- ▶ Security in green communication networks
- ▶ Green techniques for sensor and actuator networks
- ▶ Green techniques for smart highways and vehicular networks
- ▶ Design, theory, and testbed of wireless power transfer
- ▶ Signal processing for simultaneous wireless information and power transfer
- ▶ Resource allocation to achieve high energy efficiency cellular networks

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**Manuscript Due**

Friday, 2 June 2017

**First Round of Reviews**

Friday, 25 August 2017

**Publication Date**

Friday, 20 October 2017