

The International Wireless Communications and Mobile Computing Conference (IWCMC 2014), Nicosia, Cyprus, August 4-8, 2014.

CALL FOR PAPERS-SPECIAL SESSION  
**5G Wireless Communication Systems**

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With the fourth generation (4G) system development concluded and current deployments around the world, wireless researchers are already focusing on the development of next of wireless technologies and standards collectively coined as 5G communication systems. It is expected that an unprecedented number of devices based on the Internet protocol will demand 1000x increase in mobile and Internet traffic from 5G communication systems. In addition, due to issues such as climate change, Green solutions must be integrated to these emerging suite of 5G communication systems. They must be also capable of deploying security solutions aimed at eradicating privacy and security threats and ensuring traffic safety, national security and public safety.

In order to successfully overcome these challenges, strong efforts from the research community are needed to seek innovative technological solutions. To this end, the vision is that 5G communication systems must be empowered with concepts such as high spectral efficiency and energy efficient network design. Further, 5G systems are expected to incorporate promising technologies such as cooperative communications, massive MIMO, green communications and energy harvesting, heterogeneous deployment, re-configurability and wireless security.

The goal of this special session is to publish high-quality research papers that collectively provide insight into 5G wireless communication network design. In particular, we solicit research papers on PHY and high layer aspects for future 5G communication systems, including but not limited to the following topics:

- PHY/MAC layer novel technologies with improved spectral efficiency
- Multiple access/modulation schemes for 5G communications
- Wireless channel modeling and deployment requirements for 5G communications
- Small cells and Heterogeneous Networks
- Novel cooperative techniques
- Harnessing new spectrum through mmWave, carrier aggregation, or dynamic spectrum allocation
- Massive MIMO, Full Dimension MIMO, remote radio heads
- Energy efficiency and energy harvesting technologies
- Full-duplex operation
- PHY-layer secrecy
- Interference management techniques for 5G architectures and technologies
- Cognitive and reconfigurable wireless radios
- Self-organizing networks and system optimization for 5G communications
- Cloud based Radio Access Networks
- Protocols for 5G communications
- Device-to-Device communications
- Machine to machine communications

**Deadline:** 20 January 2014