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## **Special Issue on Interference management in 4G Wireless Networks**

With more and more smartphones and other portable multimedia devices (e.g., iPhone/iPad) emerging in the market, and with their predictably explosive growth in the near future, high-data-rate wireless transmissions have become more urgent a necessity than ever. Extensive research/standardization efforts have been ongoing to fulfill such requirements, and existing wireless networks worldwide are being upgraded to support higher data rate transmissions. Among all these efforts, fourth-generation broadband cellular networks, such as LTE, mobile WiMax and their advanced versions, have been proved to be able to increase data rate and network capacity by employing advanced technologies such as MIMO, OFDMA, HARQ and AMC, etc. Larger frequency bandwidths are utilized and higher spectrum efficiency can be achieved. However, interference, especially inter-cell interference, is the major impediment against the reliable and spectrally efficient wireless transmissions, due to the broadcast nature of the wireless channel. Effective interference mitigation technologies and network planning, therefore, are crucial for the successful deployment and operation of wireless cellular networks. This special issue aims to *bring together contributions on recent advances in the field of interference mitigation technologies for fourth-generation wireless systems*. Original contributions related to all aspects of interference cancellation technologies are encouraged. Topics of interest include, but not limited to:

- Signal processing techniques for interference mitigation
- Game theoretical approach to interference management in fourth-generation wireless systems
- Interference cancellation technologies with limited feedback
- Distributed optimization techniques for multi-cell wireless networks
- Resource allocation and optimization for OFDM/OFDMA wireless networks
- Coding and hybrid ARQ technologies for interference channel
- Inter-cell interference coordination and management
- Beamforming for interference mitigation
- Network MIMO techniques
- Cross-layer optimization and interference mitigation techniques
- Fractional frequency reuse techniques for interference mitigation
- Interference management for small cells and femto cells
- Power control and energy-efficient communications for multi-cell systems

### **Important Dates**

<b>Submission Due Date</b>	<b>May 15<sup>th</sup> 2011</b>
<b>Author Notification</b>	<b>Sep 15<sup>th</sup> 2011</b>
<b>Final Manuscript due</b>	<b>Oct 15<sup>th</sup> 2011</b>
<b>Publication Date</b>	<b>Q4 2011</b>

### **Submission**

Authors are invited to submit original and unpublished papers. Submissions should follow the author guidelines of Journal of Communications and the complete instructions for prospective authors can be found at

<http://www.academpublisher.com/jcm/authorguide.html>.

Authors should submit the paper in PDF format to corresponding Guest Editor (Dr. Kai Yang, [kyee@ee.columbia.edu](mailto:kyee@ee.columbia.edu)), with a title of "[JCM-SI] Submission: 4G Wireless". No other file formats are accepted. For further questions or inquiries, please contact the guest editors

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