



Journal of Electrical and Computer Engineering

Special Issue on
**Advanced Interference Management for
Next-Generation Wireless Networks**

CALL FOR PAPERS

The proliferation of new devices and applications requires the next-generation wireless networks to have the capability of serving enormous number of customers with high quality. To achieve this capability, various new infrastructures have been introduced, such as heterogeneous networks, cloud radio access networks, and massive MIMO systems. With unprecedented number and types of infrastructures sharing limited spectrum, improvement of spectrum efficiently becomes essential to the success of the next-generation wireless networks. This task calls for more advanced interference management techniques that are cognitive, cooperative, and user centric. Moreover, interference management is intrinsically coupled with other network operations. For instance, to build green and sustainable communication networks, it is important to jointly design radio resource, interference management techniques, and wireless energy harvesting; to achieve secure wireless communication; it is beneficial to augment contemporary wireless security schemes using interference management techniques that generate desirable interference to the eavesdroppers. The development of these techniques will become the key stone to fully unleash the potential of next-generation wireless networks.

This special issue invites submission of original articles addressing the design and analysis of advanced interference management techniques. By cataloging innovative interference management techniques and characterizing their performance, this special issue aims at pushing the boundary of the capability of next-generation wireless networks.

Potential topics include, but are not limited to:

- ▶ Cross-tier interference mitigation in heterogeneous networks
- ▶ Interference suppression technologies for dense small cell networks
- ▶ Interference exploitation for efficient wireless energy transfer networks
- ▶ Cooperative interference management in MIMO networks
- ▶ Interference mitigation techniques in massive MIMO networks
- ▶ Low-complexity signal processing algorithms for cloud radio access networks
- ▶ Compressive sensing enabled interference mitigation
- ▶ Advanced radio resource management for interference-limited 5G systems
- ▶ Interference management techniques for wireless secrecy
- ▶ Scalable interference mitigation for large wireless networks

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Liangzhong Ruan, Massachusetts
Institute of Technology, Cambridge,
USA
lruan@mit.edu

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wangrui@ustb.edu.cn

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Science and Technology, Clear Water
Bay, Hong Kong
eewendaol@ust.hk

Derrick Ng, University of New South
Wales, Sydney, Australia
w.k.ng@unsw.edu.au

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