

Special Issue on  
**Enhanced Multicarrier Transmission Techniques for 5G  
Wireless Communications**

# CALL FOR PAPERS

The multicarrier transmission technique, such as orthogonal frequency division multiplexing (OFDM), has been widely adopted in current 4G and other wireless communications standards due to its high spectrum efficiency and robustness to frequency. Furthermore, the multicarrier transmission technique is also widely considered during the evolution of the air interface and radio access network (RAN) to 5G mobile networks.

For supporting the high transmission rate and ensuring the system performance of 5G, traditional multicarrier transmission techniques should also be improved to adapt the wireless environments of 5G, by removing the limitations of the traditional technique such as high peak-to-average power ratio (PAPR), sensitivity to carrier frequency offsets (CFO), and high out-of-band radiation. Furthermore, there are still a series of unsolved design problems such as carrier aggregation, enhanced multiple access (MA), and solution to high mobility environments. Lastly, in recent years, there are many developed multicarrier transmission techniques, such as OFDM/OQAM, vector OFDM, and subcarrier index modulation OFDM, which offer different tradeoff among spectrum efficiency, system performance, and computational complexity. Therefore, it is a challenging problem to decide the best multicarrier transmission techniques for the future wireless communications.

Due to the above design challenges, we invite researchers to contribute original research articles as well as review articles that seek addressing the issues of enhanced multicarrier transmission techniques for 5G wireless communications.

Potential topics include but are not limited to the following:

- ▶ Enhanced multiple access techniques including SC-FDMA, OFDMCDMA, OFDM-IDMA, and OFDM-NOMA
- ▶ Out-of-band radiation reduction techniques such as filtered OFDM and OFDM/OQAM
- ▶ Novel peak-to-average power reduction techniques
- ▶ Cognitive radio with flexible frequency resource
- ▶ Enhanced carrier aggregation for broadband wireless communications
- ▶ Time and frequency synchronization for broadband multicarrier systems
- ▶ Precoded OFDM and FEC design in 5G systems
- ▶ Massive MIMO for multicarrier 5G systems
- ▶ Advanced signal processing in multicarrier systems

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jcnc/emtt/>.

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