

Special Issue on  
**RF Front-End Circuits and Architectures  
for IoT/LTE-A/5G Connectivity**

CALL FOR PAPERS

The concepts of Internet-of-Things (IoT) and Internet-of-Everything (IoE) (e.g., smart city) have been driving the evolution of wireless communications. With ever-increasing demand for higher data rates, service carriers have improved the existing 4th-generation (4G) networks with carrier aggregation and multi-input multioutput (MIMO) antenna techniques, the key features of LTE-Advanced (LTE-A). To evolve beyond 4G, the 5th-generation (5G) networks need to be scalable, versatile, and energy-smart for the hyperconnected IoE world. By employing advanced modulation schemes, massive MIMO, beamforming, and mm-wave carriers, the 5G connectivity is expected to achieve significantly enhanced data rate (10 Gbps peak data rate), universal coverage, spectral/spatial diversity/efficiency, and/or minimized latency (sub-1ms).

The emerging connectivity applications have imposed new yet stringent specs to the design of RF front-ends. Furthermore, due to various market factors, designers are facing additional complexities such as multiband, multimode (2G/3G/4G/LTE-A/5G, WiFi, Bluetooth, GPS, etc.), small form factor while balancing cost competitiveness, ever-better performance, and longer battery life. Overcoming these challenges requires high performance innovative solutions.

This special issue aims to publish original research articles as well as review articles that present the state-of-the-art circuit and architecture solutions to help address the design challenges of RF front-ends for the IoT/LTE-A/5G connectivity.

Potential topics include but are not limited to the following:

- ▶ Active circuits for RF/mm-wave front-ends (PA, LNA, VGA, phase shifter, etc.)
- ▶ High performance passive circuits for RF/mm-wave front-ends (antenna, filter, combiner, divider, coupler, switch, phase shifter, etc.)
- ▶ Tunable and reconfigurable RF front-ends for multiband multimode operation
- ▶ PA linearization and efficiency enhancement techniques (predistortion, envelope tracking, Doherty, polar, outphasing, etc.)
- ▶ Mm-wave phased-array systems for 5G
- ▶ Architectures and circuits for carrier aggregation, massive MIMO, and full-duplex

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/wcmc/rffe/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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