Special Issue

Emerging Antenna and Radiofrequency Technologies for 5G and 6G Wireless Communications

Message from the Guest Editor

The 5G and upcoming 6G wireless communications demand new paradigms in the fields of either antenna or RF circuits, which can significantly improve the coverage and enhance the performance of the systems through a cost-effective and energy-efficient manner. MIMO antennas, including multibeam antennas, provide a solution for high-density coverage with an agile beam-steering ability. However, the scale of both the antenna array and its associated RF circuit increases drastically, restricting the implementation of these techniques. Meanwhile, RF signal processing, especially digital linearization technology, also faces great challenges. Therefore, emerging techniques focusing on antennas and RF design are required to alleviate the design complexity and meet the goals of 5G and 6G. In addition, emerging techniques across borders, including, but not limit to, the artificial intelligence and additive manufacturing, can further promote the development of antennas and RF circuits with efficient goal-driven optimization and customized fabrication.

Guest Editor

Dr. Yan Zhang

State Key Laboratory on Millimeter Waves, School of Information Science and Engineering, Southeast University, Nanjing, China

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Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

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Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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