

Special Issue

Active or Passive Metasurface for Wireless Communications

Message from the Guest Editors

Metasurfaces pervade wireless communications via their expressions in multiple-input multiple-output (MIMO), millimeter wave and terahertz, full-duplex, edge computing, non-orthogonal multiple access, cognitive radio, physical layer security, backscatter, simultaneous wireless information and power transfer (SWIPT), localization, etc. Depending on whether radio frequency (RF) chains are involved or not, metasurfaces can be divided into two categories: active and passive metasurfaces. Typical examples of the difference include passive intelligent reflection surface (IRS)/reconfigurable intelligent surface (RIS) and active holographic metasurfaces. Currently, metasurfaces are primarily used to reconfigure wireless environments or to act as transceivers. Accompanying these applications, however, is the skyrocketing difficulty of hardware overheads, computational complexity, power consumption, interference management, etc. Conversely, the potential of metasurfaces remains effectively unrealized. New related technologies or applications deserve to be explored, such as microwave/ RF QR code, RF neural network, holographic imaging, etc.

Guest Editors

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Deadline for manuscript submissions

closed (15 November 2024)



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Electronics is a multidisciplinary journal designed to appeal to a diverse audience of research scientists, practitioners, and developers in academia and industry. The journal is devoted to fast publication of latest technological breakthroughs, cutting-edge developments, and timely reviews of current and emerging technologies related to the broad field of electronics. Experimental and theoretical results are published as regular peer-reviewed articles or as articles within Special Issues guest-edited by leading experts in selected topics of interest.

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