Special Issue

Ultrawideband Closely Coupled Metasurfaces: Antenna Optimization and Performance Enhancement in Communication Systems

Message from the Guest Editors

In recent years, the integration of ultrawideband tightly coupled antennas with artificial metasurfaces has yielded revolutionary breakthroughs in next-generation wireless communication and radar systems. With the rapid development of 5G/6G, terahertz communications, and intelligent stealth technologies, the demand for antenna systems with broader bandwidth, flexible beam control, and enhanced scattering reduction capabilities is increasing. This Special Issue aims to compile cutting-edge research that addresses core challenges in high-frequency, highly integrated, and intelligent antenna design.

- Optimization of gain and beamwidth for ultrawideband antennas
- Innovative applications of metasurfaces in antenna beamforming and control
- Real-time dynamic response mechanisms in smart reconfigurable antenna systems
- Design and modeling of ultrawideband tightly coupled antenna arrays
- Electromagnetic wavefront manipulation using tunable metasurfaces
- Metasurface–antenna integration for stealth applications
- AI-driven optimization methods for antenna performance
- Integration techniques for terahertz tightly coupled systems

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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 guestedited by leading experts in selected topics of interest.

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