Special Issue

Millimeter- and Terahertz-Wave Antennas and Phased Arrays for Ultra-Broadband Wireless

Message from the Guest Editors

Microwave, millimeter-wave (mmW), and terahertz (THz) frequency bands are being pursued for beyond 5G, enabling ultra-broadband wireless communications to unlock 100 GB/s data rates. Because these bands all together occupy but a tiny fraction of the electromagnetic spectrum, photonics technologies can be used to efficiently propagate and manipulate these signals. In fact, photonic technologies have already demonstrated broadband signal generation, up- and down-conversion, as well as true-time-delay beam-forming of phased array antennas. The purpose of this Special Issue is to highlight a broader view of the current state-of-the-art in crucial developments to enable photonics-driven beam-forming and beam-steering phased array antennas. Particularly, the focus is placed on covering integrated microwave photonic approaches, in which photonic integration technology is employed to overcome the energy-efficiency, flexibility and scalability, as well as performance limitations of the current systems using fiber-optic components. The topics covered also include additional key technologies, such as novel antenna approaches and dielectric waveguide structures.

Guest Editors

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You are invited to contribute a research article or a comprehensive review for consideration and publication in *Photonics* (ISSN 2304-6732). *Photonics* is an online open access journal covering both the fundamental and applications of optics and photonics. *Photonics* strives to provide an avenue to allow authors to disseminate their scientific findings—both theoretical/ simulations and experimental works—in highly accessible peer-reviewed journal publications. The manuscript in *Photonics* will be handled with quick turnaround production processing time. We welcome authors to submit their manuscripts for publications in *Photonics*. Our goal in *Photonics* is to enable fast dissemination of high impact works to the scientific community.

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