

Special Issue

Recent Advances in the Convergence of Wireless and Optical Technologies

Message from the Guest Editors

The emerging ecosystem of solutions, suggestions, technologies, and inter-disciplinary areas of interest comprising the “Beyond-5G” (B5G) scope demonstrates the shift towards even higher frequencies of interest than the allocated 5G spectrum. Mm-wave frequencies used for massive MIMO systems in the 60–83 GHz spectrum; the exploitation of findings in the 150 GHz region; the push towards THz directional communications; and the additional push for wireless optical applications and solutions in the infrared spectrum (namely for Industrial 5.0 solutions), the ultra-violet spectrum (for sensing and security applications), and visible light communications (VLCs) (with all the open issues and challenges that they present) confirm that the future lies in the area of ultra-dense ultra-high-capacity systems where sensing and AI-assisted beam steering will improve novel antenna engineering, whereas network optimization will be conducted on the basis of channel estimation techniques. Use cases cover a wide variety of areas, such as Industry 5.0, infrared FSO, smart city verticals, connected vehicles, and lidar techniques.

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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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