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Millimeter Wave and Signal Processing

IEEE Future Networks

An IEEE 5G and Beyond Technology Roadmap

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ABSTRACT

The "Millimeter-Waves and Signal-Processing" Working Group (MMW-SP WG) will examine improvements in current millimeter-wave architectures, hardware capabilities, and signal processing techniques to enable 5G systems to achieve the 3GPP Release 16 requirements for enhanced massive mobile broadband (eMBB), ultra-reliable low-latency communication (URLLC), and massive machine to machine (MM2M) use cases. The WG will translate the requirements for these drivers and describe technical challenges that should be addressed to support the growth of 5G applications within the 3-, 5-, and 10-year timeframes.

Key words:

5G, 6G, 5G and Beyond, millimeter wave (mmWave), mobile handsets, mesh-enabled radios, bandwidth, low latency, radio architecture, high-band, UE, BS, BH, user equipment, base station, bandwidth, low latency, radio architecture, spectral efficiency, energy efficiency, linearity, semiconductor technology, Si, SiGe, GaN, heterogeneous integration, packaging, antenna-in-package, antenna-on-chip, antenna arrays.

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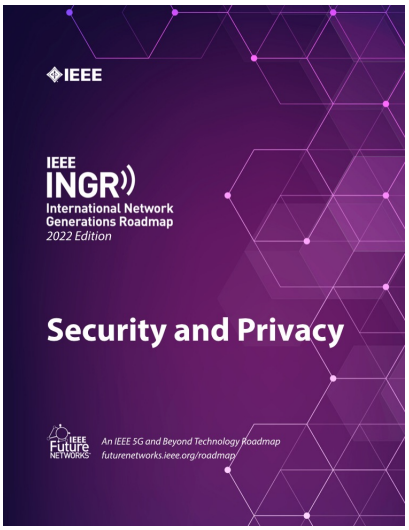

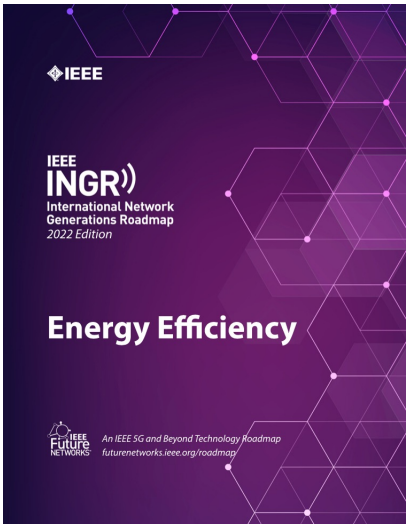

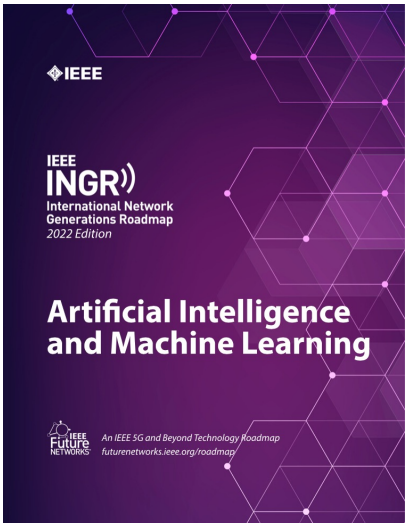

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