

TOPIC: Low Complexity Detectors for Faster-Than-Nyquist Signaling

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Abstract

Despite the ever-increasing demand for high data rates, limited spectrum resources necessitate the use of new techniques where bandwidth is used more effectively. One of the most important ways to get more efficient bandwidth is FTN (Faster-Than-Nyquist) technique that allows the transmission of more symbols in the same bandwidth by using non-orthogonal pulses in the transmitter. FTN signaling has become the focus of attention in recent years, as it offers higher spectral efficiency communication with a reasonable increase in complexity. In particular, it has been demonstrated in many recent studies that the use of FTN signaling is now an inevitable necessity in 5G and later technologies. In this seminar, the principal of FTN technique and low complexity detectors for Faster-Than-Nyquist signaling will be presented.