

SEMINAR

TOPIC : Investigating Convenient Bit Pattern of QPSK and QAM Methods for Pulse Compression in MTI Radars

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HOUR : 15:00

PRESENTER : Ömer COŞKUN

ADVISOR : Prof.Dr.Asaf Behzat ŞAHİN

LINK: <https://zoom.us/j/8908557430?pwd=NDV0OVI0Wng1aWVZckZSaU1aL01kQT09>

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Investigating Convenient Bit Pattern of QPSK and QAM Methods for Pulse Compression in MTI Radars

In radar systems, high range resolution requires shorter pulse, on the other hand, high transmitted pulse energy requires longer pulses. Pulse compression is a technique which helps to handle this trade-off by modulating transmitted pulse in sufficient duration and compressing received echoes by decoding their modulation. Hence, a good range resolution and sufficient range measurement are achieved by this techniques. For Moving Target Indication(MTI) radars, since the measuring velocity of the target is an important task, the Doppler effect must be taken into account for the pulse compression techniques in these type radar systems. In this seminar, the modulation techniques that are used for pulse compression, Doppler shift effect for this techniques on auto-correlator/matched filter output and Peak-Sidelobe Ratio(PSLR) will be presented.