Abstract

In this paper we have proposed a new pulse compression technique for polyphase codes. In the proposed technique amplitude weighting is applied to a combination of the incoming signal and one-bit shifted version of the incoming signal. This technique produces better peak side lobe ratio (PSL) and integrated side lobe ratio (ISL) than all other conventional sidelobe
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reduction techniques. In simulation results the performance of Woo filter, Asymmetrical weighting and Amplitude weighting Techniques are compared with the proposed technique. Main lobe splitting which is the main disadvantage in Woo filter is eliminated in this techniques and it is easy to implement and incurs a minimal signal to noise ratio SNR loss.

Reference


Index Terms

Computer Science          Communications

Key words
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Peak sidelobe level (PSL)

Integrated sidelobe level (ISL)

Signal-to-noise ratio loss (SNR)