Title (en)

ADAPTIVE CALCULATION OF PULSE COMPRESSION FILTER COEFFICIENTS FOR A RADAR SIGNAL

Title (de)

ADAPTIVE BERECHNUNG VON PULSKOMPRESSIONS-FILTERKOEFFIZIENTEN FÜR EIN RADAR-SIGNAL

Title (fr)

CALCUL ADAPTATIF DE COEFFICIENTS DE FILTRE DE COMPRESSION D'IMPULSIONS POUR SIGNAL RADAR

Publication

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Application

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Priority

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Abstract (en)

[origin: WO2009026911A2] The invention relates to a method for adaptively calculating pulse compression filter coefficients for a receive signals of a radar system, said receive signal being evaluated using a complex pulse compression mismatch filter. In said method, a set h(t) of pulse compression filter coefficients for a pulse compression mismatch filter is calculated for an ideal theoretical receive signal s(t) in such a way that a pulse compression output signal is obtained that has a desired main lobe/sidelobe ratio. For a distorted receive signal, a transformed set of pulse compression filter coefficients Hopt(f) for the complex pulse compression mismatch filter Hopt(f) is calculated according to the following formula: (I), wherein S(f) represents a Fourier transform of an undistorted receive signal s(t), Sv(f) represents the Fourier transform of a distorted receive signal sv(t), Sv*(f) represents the complex conjugate of Sv(f), and H(f) represents the Fourier transform of the pulse compression mismatch filter h(t).

IPC 8 full level

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CPC (source: EP US)

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