ROBUST SUBSPACE TECHNIQUE FOR JOINT ANGLE/DOPPLER ESTIMATION IN NON−GAUSSIAN CLUTTER (WedPmOR7)

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Abstract :

We consider the problem of joint angle and doppler estimation for Space−Time Adaptive Processing (STAP) airborne radar in nongaussian clutter which is modeled as a complex symmetric alpha stable process. We introduce a sign covariance estimate which has almost robust performance in heavy tailed noise. The subspace estimate is calculated via the propagator method to reduce the computational load in the way that it does not require the eigendecomposition. Performance of the proposed technique is assessed through simulations and it is shown that the method reveals better performance than FLOM−MUSIC and ROC−MUSIC.

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