ASYMPTOTICALLY MINIMUM VARIANCE ESTIMATOR IN THE SINGULAR CASE (TueAmPO4)

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Abstract : This paper addresses asymptotically (in the number of measurements) minimum variance (AMV) estimators within the class of estimators based on a mixture of real and complex–valued sequence of statistics whose first covariance of its asymptotic distribution is singular. Thanks to two conditions, we extend the standard AMV estimator. We prove that these conditions are satisfied for the estimates of orthogonal projection matrices used in subspace–based algorithms. Finally, we illustrate our findings for subspace–based algorithms in the DOA estimation for complex noncircular signals.