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Components with Equal Variance

3.2.2 Independent Components with Unequal Variances 3.2.3 General Case: Eigendecomposition; 3.2.4 Optimum Signal Design; 3.2.5 Interference Matrix: Estimator-Subtractor; 3.2.6 Low-Rank Models; 3.2.7 Summary; 3.3 Equal Mean Vectors; 3.3.1 Diagonal Covariance Matrix on H_0 : Equal Variance; 3.3.1.1 Independent, Identically Distributed Signal Components; 3.3.1.2 Independent Signal Components: Unequal Variances; 3.3.1.3 Correlated Signal Components; 3.3.1.4 Low-Rank Signal Model; 3.3.1.5 Symmetric Hypotheses, Uncorrelated Noise; 3.3.2 Nondiagonal Covariance Matrix on H_0 ; 3.3.2.1 Signal on H_1 Only; 3.3.2.2 Signal on Both Hypotheses; 3.3.3 Summary; 3.4 General Gaussian; 3.4.1 Real Gaussian Model; 3.4.2 Circular Complex Gaussian Model; 3.4.3 Single Quadratic Form; 3.4.4 Summary; 3.5 M Hypotheses; 3.6 Summary; 3.7 Problems; 4 Classical Parameter Estimation; 4.1 Introduction; 4.2 Scalar Parameter Estimation; 4.2.1 Random Parameters: Bayes Estimation; 4.2.2 Nonrandom Parameter Estimation; 4.2.3 Bayesian Bounds; 4.2.3.1 Lower Bound on the MSE; 4.2.3.2 Asymptotic Behavior; 4.2.4 Case Study; 4.2.5 Exponential Family; 4.2.5.1 Nonrandom Parameters; 4.2.5.2 Random Parameters; 4.2.6 Summary of Scalar Parameter Estimation; 4.3 Multiple Parameter Estimation; 4.3.1 Estimation Procedures; 4.3.1.1 Random Parameters; 4.3.1.2 Nonrandom Parameters; 4.3.2 Measures of Error; 4.3.2.1 Nonrandom Parameters; 4.3.2.2 Random Parameters; 4.3.3 Bounds on Estimation Error; 4.3.3.1 Nonrandom Parameters; 4.3.3.2 Random Parameters; 4.3.4 Exponential Family; 4.3.4.1 Nonrandom Parameters; 4.3.4.2 Random Parameters; 4.3.5 Nuisance Parameters; 4.3.5.1 Nonrandom Parameters; 4.3.5.2 Random Parameters; 4.3.5.3 Hybrid Parameters; 4.3.6 Hybrid Parameters; 4.3.6.1 Joint ML and MAP Estimation; 4.3.6.2 Nuisance Parameters

Sommario/riassunto

Originally published in 1968, Harry Van Trees's *Detection, Estimation, and Modulation Theory, Part I* is one of the great time-tested classics in the field of signal processing. Highly readable and practically organized, it is as imperative today for professionals, researchers, and students in optimum signal processing as it was over thirty years ago. The second edition is a thorough revision and expansion almost doubling the size of the first edition and accounting for the new developments thus making it again the most comprehensive and up-to-date treatment of the subject. With a wide range
