

Multihypothesis Sequential Probability Ratio Tests

Part I: Asymptotic Optimality

Part II: Accurate Asymptotic Expansions for Expected Sample Size



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Outline

- Introduction
- Objectives
- System Model
- MSPR Tests
 - Test δ_a – Bayesian Optimality
 - Test δ_b – LLR test
- Asymptotic Optimality of MSPR Tests
 - The case of i.i.d. Observations
 - Higher-order Approximation for accurate results
- Conclusions

- MSPRT – Multiple hypothesis + SPRT
- Many applications need $M \geq 2$ hypothesis
 - Multiple-resolution radar systems
 - CDMA systems
- The quasi-Bayesian MSPRT with expected sample size in asymptotical i.i.d case was established by V. Veeravalli.

Need...

- make accurate decision by shortest observation time for MSPRT