歸檔

〈統計推論〉資格考範圍

1. Properties of a Random Sample
   Distribution of Functions of Random Variables, Limiting Distributions
2. Principles of Data Reduction
   Sufficiency Principle (Sufficient, Minimal Sufficient, Ancillary and Complete Statistics)
   Likelihood Principle
   Equivalence Principle
3. Point Estimation
   Methods of Finding Estimators (Method of Moments, MLE, Bayes)
   Methods of Evaluating Estimators (Mean Squared Error, Best Unbiased Estimators, Loss Function Optimality)
4. Hypothesis Testing
   Methods of Finding Tests (LRT, Bayes Test, Union-Intersection and Intersection-Union Tests)
   Methods of Evaluating Tests (Most Powerful Tests, Loss Function Optimality)
5. Interval Estimation
   Methods of Finding Interval Estimators
   Methods of Evaluating Interval Estimators (Bayesian Optimality, Loss function Optimality)
6. Asymptotic Evaluations
   Consistency, Efficiency, Asymptotic Distribution of LRTs, Large-Sample Tests, Large-Sample Intervals

參考書目：

1. **Statistical Inference,** 作者：**Casella and Berfer**
2. **Mathematical Statistics,** 作者：**Shao**
3. **Theory of Point Estimation,** 作者：**Lehman**
4. **Testing Statistical Hypotheses,** 作者：**Lehman**
5. **Linear Statistical Inference and Its Applications,** 作者：**Rao**
6. **Mathematical Statistics,** 作者：**Ferguson**

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