

MA40092 CLASSICAL STATISTICAL INFERENCE

§1 Some revision and useful definitions

§1.1 Some standard distributions revisited

§1.2 Exponential families

§1.3 Sufficiency

§1.4 Revision of properties of maximum likelihood estimation

§2 Point estimation

§2.1 Bias and variance considerations

§2.2 Rao-Blackwell theorem

§2.3 Cramer-Rao lower bound and efficiency

§2.4 Minimum variance unbiased estimators

§3 Asymptotic theory of maximum likelihood estimates

§3.1 Asymptotic theory

§3.2 Applications

§4 Hypothesis testing: Simple null hypotheses

§4.1 Review of hypothesis testing and the Neyman-Pearson lemma

§4.2 Composite alternative hypotheses - one sided

§4.3 Composite alternative hypotheses - two sided

§5 Hypothesis testing: Compound null hypotheses

§5.1 Monotone likelihood ratio tests

§5.2 Generalised likelihood ratio tests

<http://people.bath.ac.uk/masmah/MA40092.bho>