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Nota di contenuto	Comparative Statistical Inference; Contents; Preface; Preface to Second Edition; Preface to Third Edition; Acknowledgements; Chapter 1. Introduction: Statistical Inference and Decision-making; 1.1 What is Statistics?; 1.2 Probability Models; 1.3 Relevant Information; 1.4 Statistical Inference and Decision-making; 1.5 Different Approaches; 1.6 Arbitrariness and Controversy; 1.7 Historical Comment and Further References; Chapter 2. An Illustration of the Different Approaches; 2.1 A Practical Example; 2.2 Sample Data as the Sole Source of Information: the Classical Approach; 2.2.1 Batch Quality 2.2.2 Component Lifetimes 2.3 Relevant Prior Information: the Bayesian Approach; 2.3.1 Prior Information on Batch Quality; 2.3.2 Prior Attitudes about Component Lifetimes; 2.4 Costs and Consequences: Simple Decision Theory Ideas; 2.5 Comment and Comparisons; Chapter 3. Probability; 3.1 Types of Probability; 3.2 'Classical' Probability; 3.3 The Frequency View; 3.4 Logical Probability; 3.5 Subjective Probability; 3.6 Other Viewpoints; 3.6.1 Chaos; 3.6.2 Fuzzy Set Theory; 3.6.3 Risk, Uncertainty and Sensitivity Analysis; 3.7 Some Historical Background;

3.8 And So; 3.9 And Yet

Chapter 4. Utility and Decision-making
4.1 Setting a Value on Rewards and Consequences; 4.2 The Rational Expression of Preferences; 4.3 Preferences for Prospects and Mixtures of Prospects; 4.4 The Numerical Assessment of Prospects; 4.5 The Measurement of Utilities; 4.5.1 Formal Construction of Utilities; 4.5.2 Personal Expression of Utilities; 4.6 Decision-making; 4.7 The Utility of Money; 4.8 Comment: Mathematical Refinements: Distinctions of Attitude; Chapter 5. Classical Inference; 5.1 Basic Aims and Concepts; 5.1.1 Information and its Representation

5.2 Estimation and Testing Hypotheses-the Dual Aims
5.3 Point Estimation; 5.3.1 Criteria for Point Estimators; 5.3.2 Optimum Estimators; 5.3.3 Methods of Constructing Estimators; 5.3.4 Estimating Several Parameters; 5.4 Testing Statistical Hypotheses; 5.4.1 Criteria for Hypothesis Tests; 5.4.2 Uniformly Most Powerful Tests; 5.4.3 Construction of Tests; 5.5 Region and Interval Estimates; 5.6 Ancillarity, Conditionality, Modified forms of Sufficiency and Likelihood; 5.6.1 The Sufficiency, Conditionality and Likelihood Principles; 5.6.2 Modified Likelihood Forms (Marginal, Partial, Profile, etc.)
5.7 Comment and Controversy
5.7.1 Initial and Final Precision; 5.7.2 Prediction and Tolerance Regions; 5.7.3 Hypothesis Tests and Decisions; 5.7.4 Counter Criticism; Chapter 6. Bayesian Inference; 6.1 Thomas Bayes; 6.2 The Bayesian Method; 6.3 Particular Techniques; 6.4 Prediction in Bayesian Inference; 6.5 Prior Information; 6.5.1 Prior Ignorance; 6.5.2 Vague Prior Knowledge; 6.5.3 Substantial Prior Knowledge; 6.5.4 Conjugate Prior Distributions; 6.5.5 Quantifying Subjective Prior Information; 6.6 Computing Posterior Distributions; 6.7 Empirical Bayes' methods: Meta-prior Distributions
6.7.1 Empirical Bayes' Methods

Sommario/riassunto

This fully updated and revised third edition, presents a wide ranging, balanced account of the fundamental issues across the full spectrum of inference and decision-making. Much has happened in this field since the second edition was published: for example, Bayesian inferential procedures have not only gained acceptance but are often the preferred methodology. This book will be welcomed by both the student and practising statistician wishing to study at a fairly elementary level, the basic conceptual and interpretative distinctions between the different approaches, how they interrelate, what a
