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Nota di contenuto	Contemporary Bayesian Econometrics and Statistics; Contents; Preface; 1. Introduction; 1.1 Two Examples; 1.1.1 Public School Class Sizes; 1.1.2 Value at Risk; 1.2 Observables, Unobservables, and Objects of Interest; 1.3 Conditioning and Updating; 1.4 Simulators; 1.5 Modeling; 1.6 Decisionmaking; 2. Elements of Bayesian Inference; 2.1 Basics; 2.2 Sufficiency, Ancillarity, and Nuisance Parameters; 2.2.1 Sufficiency; 2.2.2 Ancillarity; 2.2.3 Nuisance Parameters; 2.3 Conjugate Prior Distributions; 2.4 Bayesian Decision Theory and Point Estimation; 2.5 Credible Sets; 2.6 Model Comparison 2.6.1 Marginal Likelihoods2.6.2 Predictive Densities; 3. Topics in Bayesian Inference; 3.1 Hierarchical Priors and Latent Variables; 3.2 Improper Prior Distributions; 3.3 Prior Robustness and the Density Ratio Class; 3.4 Asymptotic Analysis; 3.5 The Likelihood Principle; 4.

Posterior Simulation; 4.1 Direct Sampling; 4.2 Acceptance and Importance Sampling; 4.2.1 Acceptance Sampling; 4.2.2 Importance Sampling; 4.3 Markov Chain Monte Carlo; 4.3.1 The Gibbs Sampler; 4.3.2 The Metropolis-Hastings Algorithm; 4.4 Variance Reduction; 4.4.1 Concentrated Expectations; 4.4.2 Antithetic Sampling 4.5 Some Continuous State Space Markov Chain Theory 4.5.1 Convergence of the Gibbs Sampler; 4.5.2 Convergence of the Metropolis-Hastings Algorithm; 4.6 Hybrid Markov Chain Monte Carlo Methods; 4.6.1 Transition Mixtures; 4.6.2 Metropolis within Gibbs; 4.7 Numerical Accuracy and Convergence in Markov Chain Monte Carlo; 5. Linear Models; 5.1 BACC and the Normal Linear Regression Model; 5.2 Seemingly Unrelated Regressions Models; 5.3 Linear Constraints in the Linear Model; 5.3.1 Linear Inequality Constraints 5.3.2 Conjectured Linear Restrictions, Linear Inequality Constraints, and Covariate Selection 5.4 Nonlinear Regression; 5.4.1 Nonlinear Regression with Smoothness Priors; 5.4.2 Nonlinear Regression with Basis Functions; 6. Modeling with Latent Variables; 6.1 Censored Normal Linear Models; 6.2 Probit Linear Models; 6.3 The Independent Finite State Model; 6.4 Modeling with Mixtures of Normal Distributions; 6.4.1 The Independent Student-t Linear Model; 6.4.2 Normal Mixture Linear Models; 6.4.3 Generalizing the Observable Outcomes; 7. Modeling for Time Series 7.1 Linear Models with Serial Correlation 7.2 The First-Order Markov Finite State Model; 7.2.1 Inference in the Nonstationary Model; 7.2.2 Inference in the Stationary Model; 7.3 Markov Normal Mixture Linear Model; 8. Bayesian Investigation; 8.1 Implementing Simulation Methods; 8.1.1 Density Ratio Tests; 8.1.2 Joint Distribution Tests; 8.2 Formal Model Comparison; 8.2.1 Bayes Factors for Modeling with Common Likelihoods; 8.2.2 Marginal Likelihood Approximation Using Importance Sampling; 8.2.3 Marginal Likelihood Approximation Using Gibbs Sampling 8.2.4 Density Ratio Marginal Likelihood Approximation

Sommario/riassunto

Tools to improve decision making in an imperfect world This publication provides readers with a thorough understanding of Bayesian analysis that is grounded in the theory of inference and optimal decision making. Contemporary Bayesian Econometrics and Statistics provides readers with state-of-the-art simulation methods and models that are used to solve complex real-world problems. Armed with a strong foundation in both theory and practical problem-solving tools, readers discover how to optimize decision making when faced with problems that involve limited or imperfect data. The b