

Incorporating changes in theory and highlighting new applications, **Markov Chain Monte Carlo: Stochastic Simulation for Bayesian Inference, Second Edition** presents a concise, accessible, and comprehensive introduction to the methods of this valuable simulation technique. The second edition includes access to an Internet site that provides the code, written in R and WinBUGS, used in many of the previously existing and new examples and exercises. More importantly, the self-explanatory nature of the codes will enable modification of the inputs to the codes and variation on many directions will be available for further exploration.

Major changes from the previous edition:

- More examples with discussion of computational details in chapters on Gibbs sampling and Metropolis-Hastings algorithms
- Recent developments in MCMC, including reversible jump, slice sampling, bridge sampling, path sampling, multiple-try, and delayed rejection
- Discussion of computation using both R and WinBUGS
- Additional exercises and selected solutions within the text, with all data sets and software available for download from the Web
- Sections on spatial models and model adequacy

The self-contained text units make MCMC accessible to scientists in other disciplines as well as statisticians. The book will appeal to everyone working with MCMC techniques, especially research and graduate statisticians and biostatisticians, and scientists handling data and formulating models. The book has been substantially reinforced as a first reading of material on MCMC and, consequently, as a textbook for modern Bayesian computation and Bayesian inference courses.

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Preface to the second edition	xiii
Preface to the first edition	xv
Introduction	1
1 Stochastic simulation	9
1.1 Introduction	9
1.2 Generation of discrete random quantities	10
1.2.1 Bernoulli distribution	11
1.2.2 Binomial distribution	11
1.2.3 Geometric and negative binomial distribution	12
1.2.4 Poisson distribution	12
1.3 Generation of continuous random quantities	13
1.3.1 Probability integral transform	13
1.3.2 Bivariate techniques	14
1.3.3 Methods based on mixtures	17
1.4 Generation of random vectors and matrices	20
1.4.1 Multivariate normal distribution	21
1.4.2 Wishart distribution	23
1.4.3 Multivariate Student's t distribution	24
1.5 Resampling methods	25
1.5.1 Rejection method	25
1.5.2 Weighted resampling method	30
1.5.3 Adaptive rejection method	32
1.6 Exercises	34
2 Bayesian inference	41
2.1 Introduction	41
2.2 Bayes' theorem	41
2.2.1 Prior, posterior and predictive distributions	42
2.2.2 Summarizing the information	47
2.3 Conjugate distributions	49
2.3.1 Conjugate distributions for the exponential family	51

2.3.2	Conjugacy and regression models	55
2.3.3	Conditional conjugacy	58
2.4	Hierarchical models	60
2.5	Dynamic models	63
2.5.1	Sequential inference	64
2.5.2	Smoothing	65
2.5.3	Extensions	67
2.6	Spatial models	68
2.7	Model comparison	72
2.8	Exercises	74
3	Approximate methods of inference	81
3.1	Introduction	81
3.2	Asymptotic approximations	82
3.2.1	Normal approximations	83
3.2.2	Mode calculation	86
3.2.3	Standard Laplace approximation	88
3.2.4	Exponential form Laplace approximations	90
3.3	Approximations by Gaussian quadrature	93
3.4	Monte Carlo integration	95
3.5	Methods based on stochastic simulation	98
3.5.1	Bayes' theorem via the rejection method	100
3.5.2	Bayes' theorem via weighted resampling	101
3.5.3	Application to dynamic models	104
3.6	Exercises	106
4	Markov chains	113
4.1	Introduction	113
4.2	Definition and transition probabilities	114
4.3	Decomposition of the state space	118
4.4	Stationary distributions	121
4.5	Limiting theorems	124
4.6	Reversible chains	127
4.7	Continuous state spaces	129
4.7.1	Transition kernels	129
4.7.2	Stationarity and limiting results	131
4.8	Simulation of a Markov chain	132
4.9	Data augmentation or substitution sampling	135
4.10	Exercises	136
5	Gibbs sampling	141
5.1	Introduction	141
5.2	Definition and properties	142
5.3	Implementation and optimization	148

5.3.1	Forming the sample	148
5.3.2	Scanning strategies	150
5.3.3	Using the sample	151
5.3.4	Reparametrization	152
5.3.5	Blocking	155
5.3.6	Sampling from the full conditional distributions	156
5.4	Convergence diagnostics	157
5.4.1	Rate of convergence	158
5.4.2	Informal convergence monitors	159
5.4.3	Convergence prescription	161
5.4.4	Formal convergence methods	164
5.5	Applications	169
5.5.1	Hierarchical models	169
5.5.2	Dynamic models	172
5.5.3	Spatial models	176
5.6	MCMC-based software for Bayesian modeling	178
	Appendix 5.A: BUGS code for Example 5.7	182
	Appendix 5.B: BUGS code for Example 5.8	184
5.7	Exercises	184
6	Metropolis-Hastings algorithms	191
6.1	Introduction	191
6.2	Definition and properties	193
6.3	Special cases	198
6.3.1	Symmetric chains	198
6.3.2	Random walk chains	198
6.3.3	Independence chains	199
6.3.4	Other forms	204
6.4	Hybrid algorithms	205
6.4.1	Componentwise transition	206
6.4.2	Metropolis within Gibbs	211
6.4.3	Blocking	214
6.4.4	Reparametrization	216
6.5	Applications	217
6.5.1	Generalized linear mixed models	217
6.5.2	Dynamic linear models	223
6.5.3	Dynamic generalized linear models	226
6.5.4	Spatial models	231
6.6	Exercises	234
7	Further topics in MCMC	237
7.1	Introduction	237
7.2	Model adequacy	237
7.2.1	Estimates of the predictive likelihood	238

7.2.2	Uses of the predictive likelihood	248
7.2.3	Deviance information criterion	253
7.3	Model choice: MCMC over model and parameter spaces	257
7.3.1	Markov chain for supermodels	258
7.3.2	Markov chain with jumps	261
7.3.3	Further issues related to RJMCMC algorithms	270
7.4	Convergence acceleration	271
7.4.1	Alterations to the chain	271
7.4.2	Alterations to the equilibrium distribution	278
7.4.3	Auxiliary variables	282
7.5	Exercises	284
References		289
Author index		311
Subject index		316