

Sequence Simulation

For biological purposes

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Abstract

In this document I would like to discuss some methods to generate an array of biological sequences. These methods range from simple drawing from a predefined distribution.

1 Introduction

1.1 Motivation

2 Method of simulation

this document is based on chapter 13 of [Bishop, 2006]

2.1 Monte Carlo methods

2.2 Markov chain Monte Carlo methods

2.2.1 Metropolis Hasting sampling

2.2.2 Gibb sampling

2.2.3 Why is MCMC is important for Biological sequence simulation

3 Examples

References

Christopher M. Bishop. *Pattern Recognition and Machine Learning (Information Science and Statistics)*. Springer-Verlag, Berlin, Heidelberg, 2006. ISBN 0387310738.