imcmc: tutorial

Youhua Xu

yhxu@nao.cas.cn

NJU & NAOC

September 6, 2016

1 What this tutorial is about?

This tutorial is written as a gadience as how to use the Markov Chain Monte Carlo (MCMC) library: imcmc.

2 Basics: Bayesian Analysis & MCMC

Before getting start to generate MC samples with imcmc, I will brieflly review the basics of Bayesian analysis and MCMC (use Metropolis-Hastings algorithm as the example)

3 Affine-invariant ensemble sampler

4 Structure of imcmc

5 Parser

Usually one will use may parameters in her/his codes, which might be model parameters, names/paths of data and even precision controlling parameters, thus a well-designed parser is very helpful.