

Quick start with imcmc

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(Dated: January 12, 2017)

This document demonstrates how to use the MCMC library – **imcmc**, with a few simple examples.

I. WHY BUILD A LIBRARY?

It's a nightmare when if you're managing a project with lots of source files.

II. BASICS: BAYESIAN ANALYSIS & MCMC

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

III. ALGRITHMS

A. Affine-invariant ensemble

B. Metropolis-Hastings

C. Hamitonian-Monte Carlo

D. Nested sampling

IV. STRUCTURE OF THE CODE

Appendix A: 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.

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