Bivariate normal distribution

Known:

covariance matrix

Unknown:

posterior distribution

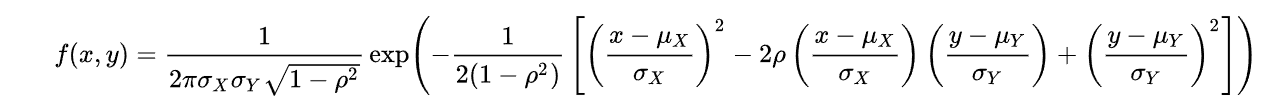
Gibbs sampling

The parameter vector

For each step t in Markov Chain

Each component of is sampled from all the other components

Bivariate distribution with



Conditional distribution:

In Gibbs

Metropolis-Hastings algorithms

Metropolis-Hastings

Random Walk Metropolis

In Bivariate normal distribution

So the algorithm is

1 initial with

2 repeat for

Draw from proposal distribution

accept with probability

With Random Walk

Auto correlation plot

Trace plot (不同的initial points)

Computing time