

Package ‘GHS’

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Type Package

Title GHS MCMC sampler using data augmented block Gibbs Sampler

Version 0.1.0

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Description Generates Posterior samples of Precision Matrix.

License What license is it under?

Encoding UTF-8

LazyData true

RoxygenNote 6.0.1.9000

Suggests knitr,
rmarkdown

VignetteBuilder knitr

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GHS_est	<i>GHS MCMC sampler using data-augmented block (column-wise) Gibbs sampler</i>
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Description

GHS_est returns a tuple whose first element is a p by p by nmc matrices of saved posterior samples of precision matrix, second element is the $p*(p-1)/2$ by nmc vector of saved samples of the local tuning parameter and the third element is the 1 by nmc vector of saved samples of the global tuning parameter

Usage

GHS_est(S, n, burnin, nmc)

Arguments

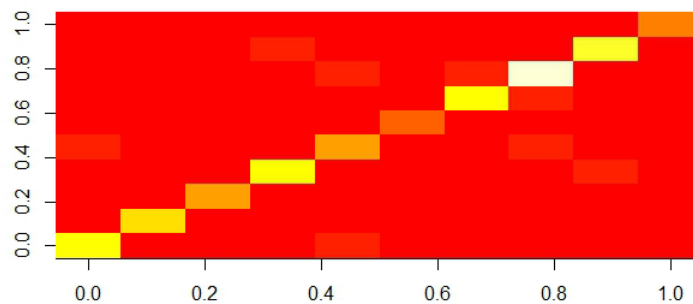
S	sample covariance matrix
n	sample size
burnin	number of MCMC burnins
nmc	number of saved samples

Examples

```

install.packages("eigeninv")
install.packages("MASS")
library(MASS) library(eigeninv)
burnin <- 100; nmc <- 5000; n <- 10 eig_val <-
rep(1,n)
z <- eigeninv(eig_val,n,symmetric=TRUE) # generates a n by n symmetric matrix having
eigenvalues as per the vector eig_val
Mu <- rep(0,10) # Mean vector
Sigma <- solve(z,tol=1e-25) # Covariance matrix Y <-
mvrnorm(n, Mu, Sigma)
S <- t(Y)%*%Y
result <- GHS_est(S,n,burnin,nmc) est_matrix <-
apply(result[[1]], c(1,2), mean) image(est_matrix)

```

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