Package ‘l1ball’

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Type Package

Title l1-ball Prior For Sparse Regression

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Description This package provides function for the l1-ball prior on high-dimensional regression. The main function, l1ball, yields posterior samples for linear regression.

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Depends R (>= 3.1.0),EnvStats, extraDistr

Encoding UTF-8

LazyData true

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Import extraDistr, EnvStats

R topics documented:

`l1ball` *l1-ball prior for sparse regression*

Description

This package provides function for the l1-ball prior on high-dimensional regression. The main function, l1ball, yields posterior samples for linear regression.

Arguments

`y`	A data vector, n by 1
`X`	A design matrix, n by p
`b_w`	The parameter in $Beta(1, b_w)$ for w
`steps`	Number of steps to run the Markov Chain Monte Carlo
`burn-ins`	Number of burn-ins

Value

trace returns a list of two component: trace_slab and trace_theta, containing all the posterior samples after burn-in.

Examples

```
p=100
X <- diag(p)
d =5
w0 <- c(rep(0, p-d), rnorm(d)+5)
y = X%*% w0
trace <- l1ball(y,X,1.5,3000,1000)
```

Index