

Package ‘spatialSPsurv’

June 1, 2020

Type Package
Title Bayesian Spatial Split Population Survival Model
Version 0.1.3
Description Contains functions to fit Bayesian spatial survival model for split population.
License MIT + file LICENSE
Encoding UTF-8
LazyData true
RoxygenNote 7.1.0
LinkingTo Rcpp,
RcppArmadillo
Imports MCMCpack,
FastGP,
stats,
Rcpp,
RcppArmadillo,
coda

R topics documented:

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frailtySPsurv	<i>frailtySPsurv</i>
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Description

Markov Chain Monte Carlo (MCMC) to run Bayesian non-spatial frailty split population survival model

Usage

```

frailtySPsurv(
  duration,
  immune,
  Y0,
  LY,
  S,
  data,
  N,
  burn,
  thin,
  w = c(1, 1, 1),
  m = 10,
  form = c("Weibull", "exponential", "loglog"),
  prop.var
)

```

Arguments

duration	...
immune	...
Y0	the elapsed time since inception until the beginning of time period (t-1)
LY	last observation year
S	spatial information (e.g. district ID) for each observation that matches the spatial matrix row/column information
data	...
N	number of MCMC iterations
burn	burn-in to be discarded
thin	thinning to prevent from autocorrelation
w	size of the slice in the slice sampling for (betas, gammas, rho). Write it as a vector. E.g. c(1,1,1)
m	limit on steps in the slice sampling. A vector of values for beta, gamma, rho.
form	type of parametric model (Exponential or Weibull)
prop.var	...

Value

chain of the variables of interest

spatialSPsurv

spatialSPsurv

Description

Markov Chain Monte Carlo (MCMC) to run Bayesian spatial split population survival model

Usage

```

spatialSPsurv(
  duration,
  immune,
  Y0,
  LY,
  S,
  A,
  data,
  N,
  burn,
  thin,
  w = c(1, 1, 1),
  m = 10,
  form = c("Weibull", "exponential", "loglog"),
  prop.var
)

```

Arguments

duration	...
immune	...
Y0	the elapsed time since inception until the beginning of time period (t-1)
LY	last observation year
S	spatial information (e.g. district ID) for each observation that matches the spatial matrix row/column information
A	Spatial Matrix (load separate spatial weights matrix file)
data	...
N	number of MCMC iterations
burn	burn-in to be discarded
thin	thinning to prevent from autocorrelation
w	size of the slice in the slice sampling for (betas, gammas, rho). Write it as a vector. E.g. c(1,1,1)
m	limit on steps in the slice sampling. A vector of values for beta, gamma, rho.
form	type of parametric model (Exponential or Weibull)
prop.var	proposal variance for Metropolis-Hastings

Value

chain of the variables of interest

SPsurv

*SPsurv***Description**

Markov Chain Monte Carlo (MCMC) to run Bayesian split population survival model with no frailties

Usage

```
SPsurv(
  duration,
  immune,
  Y0,
  LY,
  data,
  N,
  burn,
  thin,
  w = c(1, 1, 1),
  m = 10,
  form = c("Weibull", "exponential", "loglog")
)
```

Arguments

duration	...
immune	...
Y0	the elapsed time since inception until the beginning of time period (t-1)
LY	last observation year
data	...
N	number of MCMC iterations
burn	burn-in to be discarded
thin	thinning to prevent from autocorrelation
w	size of the slice in the slice sampling for (betas, gammas, rho). Write it as a vector. E.g. c(1,1,1)
m	limit on steps in the slice sampling. A vector of values for beta, gamma, rho.
form	type of parametric model (Exponential or Weibull)

Value

chain of the variables of interest

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