Package 'spm'

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Description A set of R functions for extracting from SPM output files.
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URL http://www.niwa.co.nz

Title SPM extract package

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Description

A set of R functions for extracting and processing SPM output.

Details

Package: spm Date: 2013-02-12

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spm-package SPM package

Author(s)

A. Dunn

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calc.abundance

 $Generate\ a\ multivariate\ uniform\ distribution\ based\ on\ the\ bounds\ for$

the extimated parameters

Description

Generate a multivariate uniform distribution based on the bounds for the extimated parameters

Usage

```
calc.abundance(data, categories = NULL, ages = NULL, total = T)
```

Arguments

data data representing a partition categories

Optional subset of categories

Optional subset of ages

total If true, then sum over selected categories and ages. Default = TRUE

Author(s)

Alistair Dunn

extract

Extract SPM output into R

Description

Extract SPM output into R

Usage

```
extract(file, path = "", ignore.unknown = FALSE)
```

Arguments

file the name of the input file containing model output to extract

path Optionally, the path to the file

ignore.unknown Ignore unknown objects in the output file

Author(s)

4 extract.ageweight

extract.ageingerror Utility extract function

Description

Utility extract function

Usage

```
extract.ageingerror(lines)
```

Author(s)

Alistair Dunn

extract.agesize

Utility extract function

Description

Utility extract function

Usage

```
extract.agesize(lines)
```

Author(s)

Alistair Dunn

 ${\tt extract.ageweight}$

Utility extract function

Description

Utility extract function

Usage

```
extract.ageweight(lines)
```

Author(s)

extract.covariance 5

extract.covariance

Utility extract function

Description

Utility extract function

Usage

```
extract.covariance(lines)
```

Author(s)

Alistair Dunn

 ${\tt extract.derived} {\tt quantity}$

Utility extract function

Description

Utility extract function

Usage

```
extract.derivedquantity(lines)
```

Author(s)

Alistair Dunn

 ${\tt extract.derived} quantity by {\tt cell}$

Utility extract function

Description

Utility extract function

Usage

```
extract.derivedquantitybycell(lines)
```

Author(s)

```
extract.estimatesummary
```

Utility extract function

Description

Utility extract function

Usage

extract.estimatesummary(lines)

Author(s)

Alistair Dunn

extract.estimatevalue Utility extract function

Description

Utility extract function

Usage

extract.estimatevalue(lines)

Author(s)

Alistair Dunn

 ${\tt extract.initialisation phase}$

Utility extract function

Description

Utility extract function

Usage

extract.initialisationphase(lines)

Arguments

lines

a file of scanned lines

Author(s)

extract.layer 7

extract.layer

Utility extract function

Description

Utility extract function

Usage

```
extract.layer(lines)
```

Author(s)

Alistair Dunn

extract.layerderivedview

Utility extract function

Description

Utility extract function

Usage

```
extract.layerderivedview(lines)
```

Author(s)

Alistair Dunn

extract.MCMC

Utility extract function

Description

Utility extract function

Usage

```
extract.MCMC(lines)
```

Author(s)

8 extract.partition

```
{\tt extract.objective function}
```

Utility extract function

Description

Utility extract function

Usage

```
\verb|extract.objectivefunction(lines)|\\
```

Author(s)

Alistair Dunn

extract.observation

Utility extract function

Description

Utility extract function

Usage

```
extract.observation(lines)
```

Author(s)

Alistair Dunn

extract.partition

Utility extract function

Description

Utility extract function

Usage

```
extract.partition(lines)
```

Author(s)

extract.partitionbiomass 9

```
extract.partitionbiomass
```

Utility extract function

Description

Utility extract function

Usage

```
extract.partitionbiomass(lines)
```

Author(s)

Alistair Dunn

extract.randomnumberseed

Utility extract function

Description

Utility extract function

Usage

```
extract.randomnumberseed(lines)
```

Author(s)

Alistair Dunn

extract.selectivity

Utility extract function

Description

Utility extract function

Usage

```
extract.selectivity(lines)
```

Author(s)

10 extract.spatialmap

extract.simulations

Utility extract function

Description

Utility extract function

Usage

```
extract.simulations(file, path = "")
```

Author(s)

Alistair Dunn

extract.sizeweight

Utility extract function

Description

Utility extract function

Usage

```
extract.sizeweight(lines)
```

Author(s)

Alistair Dunn

extract.spatialmap

Utility extract function

Description

Utility extract function

Usage

```
extract.spatialmap(lines)
```

Author(s)

generate.MVU 11

generate.MVU	Generate a multivariate uniform distribution based on the bounds for the extimated parameters

Description

Generate a multivariate uniform distribution based on the bounds for the extimated parameters

Usage

```
generate.MVU(file, path = "", output.file, sample.size = 1)
```

Arguments

file the name of the input file containing the estimated fits

path Optionally, the path to the file

output.file The name of the output file to write randomly generated values

sample.size The number f samples to generate

Author(s)

Sophie Mormede

PF Evaluate a preference function

Description

Evaluate a preference function

Usage

```
PF(type = "none", x, alpha, ..., rescale = T)
```

Arguments

type 1	4	type of	pre	terence	tunct	ion. '	Valid	valu	ies inc	lude	cons	tant"	, "	doublenormal'	,

"exponential", "inverselogistic", "logistic", "normal", and "threshold"

x x-values over which to evaluate. Default = 1
 alpha The value of the alpha parameter. Default = 1
 the parameters of the preference functions

rescale Rescale the function to have value 1. Default = TRUE

Author(s)

12 PFdoublenormal

Description

Evaluate the constant preference function

Usage

```
PFconstant(x, alpha, rescale = T)
```

Arguments

x x-values over which to evaluate. Default = 1 alpha The value of the alpha parameter. Default = 1

rescale Rescale the function to have value 1?. Default = TRUE

Author(s)

Alistair Dunn

PFdoublenormal	Evaluate the double normal	preference function

Description

Evaluate the double normal preference function

Usage

```
PFdoublenormal(x, alpha, mu, sigmaL, sigmaR, rescale = T)
```

Arguments

X	x-values over which to evaluate. Default = 1
alpha	The value of the alpha parameter. Default = 1

mu the mean of the double normal

sigmaL the standard deviation of the left-hand side of the double normal sigmaR the standard deviation of the right-hand side of the double normal

rescale Rescale the function to have value 1?. Default = TRUE

Author(s)

PFexponential 13

PFexponential	Evaluate the exponential	preference function

Description

Evaluate the exponential preference function

Usage

```
PFexponential(x, alpha, lambda, rescale = T)
```

Arguments

x x-values over which to evaluate. Default = 1 alpha The value of the alpha parameter. Default = 1

lambda the rate of the exponential

rescale Rescale the function to have value 1?. Default = TRUE

Author(s)

Alistair Dunn

PFinverselogistic Evaluate the inverse-logistic preference function

Description

Evaluate the inverse-logistic preference function

Usage

```
PFinverselogistic(x, alpha, a50, ato95, rescale = T)
```

Arguments

Х	x-values over which to evaluate. Default = 1
alpha	The value of the alpha parameter. Default = 1

a50 the a50 value of the inverse logisitic ato95 the ato95 value of the inverse logisitic

rescale Rescale the function to have value 1?. Default = TRUE

Author(s)

14 PFnormal

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Evaluate the logistic preference function

Description

Evaluate the logistic preference function

Usage

```
PFlogistic(x, alpha, a50, ato95, rescale = T)
```

Arguments

X	x-values over which to evaluate. Default = 1
alpha	The value of the alpha parameter. Default = 1

a50 the a50 value of the logisitic ato95 the ato95 value of the logisitic

rescale Rescale the function to have value 1?. Default = TRUE

Author(s)

Alistair Dunn

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Evaluate the normal preference function

Description

Evaluate the normal preference function

Usage

```
PFnormal(x, alpha, mu, sigma, rescale = T)
```

Arguments

X	x-values over which to evaluate. Default = 1
alpha	The value of the alpha parameter. Default = 1

mu the mean of the normal

sigma the standard deviation of the normal

rescale Rescale the function to have value 1?. Default = TRUE

Author(s)

PFthreshold 15

PFthreshold

Evaluate the threshold preference function

Description

Evaluate the threshold preference function

Usage

```
PFthreshold(x, alpha, N, lambda, rescale = T)
```

Arguments

x x-values over which to evaluate. Default = 1 alpha The value of the alpha parameter. Default = 1

N the threshhold value

rescale Rescale the function to have value 1?. Default = TRUE

Author(s)

Alistair Dunn

spm.area

utility function

Description

utility function

Usage

```
spm.area(corners)
```

Author(s)

Alistair Dunn

```
spm.convert.to.lines utility function
```

Description

utility function

Usage

```
spm.convert.to.lines(filename)
```

Author(s)

spm.get.lines

spm.dplot

utility function

Description

utility function

Usage

```
spm.dplot(..., name = T, quantiles = c(0.5), plot.mean = F, main = "", xlab = "", ylab = "", ylim, srtx = 0, bw = "nrd0", adjust = 1/3, adj = 0, fill = F, gap = 0.2)
```

Author(s)

Alistair Dunn

Description

utility function

Usage

```
spm.extract.simulated.observation(lines)
```

Author(s)

Alistair Dunn

spm.get.lines

utility function

Description

utility function

Usage

```
spm.get.lines(lines, from = -1, to = -1, contains = "",
    starts.with = "", clip.to = "", clip.from = "",
    clip.to.match = "", clip.from.match = "", ...)
```

Author(s)

spm.is.whole.number 17

```
spm.is.whole.number utility function
```

Description

utility function

Usage

```
spm.is.whole.number(string)
```

Author(s)

Alistair Dunn

spm.isin

utility function

Description

utility function

Usage

```
spm.isin(x, y)
```

Author(s)

Alistair Dunn

 ${\tt spm.make.filename}$

 $utility\ function$

Description

utility function

Usage

```
spm.make.filename(file, path = "")
```

Author(s)

spm.pos

spm.make.list

utility function

Description

utility function

Usage

```
spm.make.list(lines)
```

Author(s)

Alistair Dunn

spm.make.table

utility function

Description

utility function

Usage

```
spm.make.table(lines)
```

Author(s)

Alistair Dunn

spm.pos

utility function

Description

utility function

Usage

```
spm.pos(vector, x)
```

Author(s)

spm.pos.match

spm.pos.match

utility function

Description

utility function

Usage

```
spm.pos.match(vector, regexp)
```

Author(s)

Alistair Dunn

spm.recodevector

utility function

Description

utility function

Usage

```
spm.recodevector(in.data, from.vals, to.vals)
```

Author(s)

Alistair Dunn

```
spm.remove.first.words
```

utility function

Description

utility function

Usage

```
spm.remove.first.words(string, words = 1)
```

Author(s)

```
spm.remove.last.words utility function
```

Description

utility function

Usage

```
spm.remove.last.words(string, words = 1)
```

Author(s)

Alistair Dunn

spm.report.types

utility function

Description

utility function

Usage

```
spm.report.types()
```

Author(s)

Alistair Dunn

```
{\it spm.string.to.vector.of.numbers} \\ {\it utility function}
```

Description

utility function

Usage

```
spm.string.to.vector.of.numbers(string, sep = " ")
```

Author(s)

```
{\it spm.string.to.vector.of.words} \\ {\it utility function}
```

Description

utility function

Usage

```
spm.string.to.vector.of.words(string, sep = " ")
```

Author(s)

Alistair Dunn

spm.unpaste

utility function

Description

utility function

Usage

```
spm.unpaste(string, sep = " ")
```

Author(s)

Alistair Dunn

 ${\tt spm.zeroFun}$

utility function

Description

utility function

Usage

```
spm.zeroFun(x, delta = 1e-11)
```

Author(s)

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