

Package ‘circumstance’

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circumstance-package	<i>circumstance package</i>
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Description

circumstance provides tools for parallelizing certain **pomp** calculations.

continue	<i>Continue an iterative calculation</i>
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Description

Continue an iterative computation where it left off.

Usage

```
continue(object, ...)  
  
## S4 method for signature 'mif2List'  
continue(object, ...)  
  
## S4 method for signature 'pmcmcList'  
continue(object, ...)
```

Arguments

object the result of an iterative **pomp** computation

... additional arguments will be passed to the underlying method. This allows one to modify parameters used in the original computations.

See Also

[mif2](#)

mif2	<i>Parallel iterated filtering</i>
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Description

Runs multiple instances of mif2 using foreach.

Usage

```
## S4 method for signature 'ANY,data.frame'
mif2(data, starts, ...)

## S4 method for signature 'ANY,missing'
mif2(data, starts, ...)

## S4 method for signature 'pompList,missing'
mif2(data, starts, ...)

## S4 method for signature 'pfilterList,missing'
mif2(data, starts, ...)

## S4 method for signature 'mif2List,missing'
mif2(data, starts, ...)
```

Arguments

data passed to [pomp::mif2](#)

starts data frame containing parameters at which to begin iterated filtering

... all additional arguments are passed to [pomp::mif2](#)

See Also

[pomp::mif2.](#)

pfilter

Parallel particle filter computations

Description

Runs multiple instances of pfilter using foreach.

Usage

```
## S4 method for signature 'ANY,numeric'
pfilter(data, Nrep, ...)

## S4 method for signature 'ANY,missing'
pfilter(data, Nrep, ...)

## S4 method for signature 'pomplList,numeric'
pfilter(data, Nrep, ...)

## S4 method for signature 'pomplList,missing'
pfilter(data, Nrep, ...)
```

Arguments

data	passed to <code>pomp::pfilter</code>
Nrep	number of replicate particle filter computations to run. By default, Nrep = 1.
...	all additional arguments are passed to <code>pomp::pfilter</code>

See Also

`pomp::pfilter`.

Examples

```
library(circumstance)
library(doFuture)
library(doRNG)
registerDoFuture()
registerDoRNG()

ou2() -> ou2

plan(sequential)
system.time(ou2 |> pfilter(Np=10000,Nrep=6) -> pfs)

plan(multicore)
system.time(ou2 |> pfilter(Np=10000,Nrep=6) -> pfs)
```

plot_matrix

A scatterplot matrix with densities on the diagonal.

Description

A special scatterplot matrix.

Usage

```
plot_matrix(data, ...)

## S3 method for class 'list'
plot_matrix(
  data,
  marg.exp = 0.02,
  labels = names(data),
  alpha = 1,
  pch = 16,
  size = unit(0.03, "npc"),
  ...
)

## S3 method for class 'data.frame'
plot_matrix(
  data,
  marg.exp = 0.02,
  labels = names(data),
  alpha = 1,
  pch = 16,
  size = unit(0.03, "npc"),
  ...
)

## S3 method for class 'plotmatrix'
print(x, newpage = is.null(vp), vp = NULL, ...)
```

Arguments

data	Data to plot.
...	optional arguments, passed to hist .
marg.exp	Fraction by which to expand the plot at the margins.
labels	Names of variables plotted.
alpha, pch, size	Refer to the plotted points in the scatterplots.
x	plot_matrix object to display.

`newpage` logical; if TRUE, `grid.newpage()` will be called before the graphics are drawn.
`vp` viewport to use. See [viewport](#).

Examples

```
# requires dplyr
library(dplyr)

data.frame(
  a=rexp(n=1000,rate=1/3),
  b=rnorm(1000)
) |>
  mutate(
    c=a+b^2,
    d=a-b^3
  ) -> x

print(plot_matrix(x,alpha=0.2))

g <- plot_matrix(
  x[-2],
  labels=c(
    expression(alpha),
    expression(beta),
    expression(phi)
  ),
  alpha=0.3
)
print(g)

print(plot_matrix(as.list(x),alpha=0.2,breaks="scott"))
```

Description

Runs multiple instances of pmcmc using foreach.

Usage

```
## S4 method for signature 'ANY,data.frame'
pmcmc(data, starts, ...)

## S4 method for signature 'ANY,missing'
pmcmc(data, starts, ...)

## S4 method for signature 'pomplList,missing'
```

```
pmcmc(data, starts, ...)  
  
## S4 method for signature 'pfilterList,missing'  
pmcmc(data, starts, ...)  
  
## S4 method for signature 'pmcmcList,missing'  
pmcmc(data, starts, ...)
```

Arguments

<code>data</code>	passed to pomp::pmcmc
<code>starts</code>	data frame containing parameters at which to begin iterated filtering
<code>...</code>	all additional arguments are passed to pomp::pmcmc

See Also

[pomp::pmcmc.](#)

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