

# Package ‘circumstance’

May 18, 2022

## R topics documented:

circumstance-package . . . . .	<a href="#">1</a>
pfilter . . . . .	<a href="#">1</a>

<b>Index</b>	<a href="#">4</a>
--------------	-------------------

---

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

---

## Description

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

---

pfilter	<i>Parallel particle filter computations</i>
---------	--

---

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

**See Also**

`pomp`: `pfilter`.

**Examples**

```
options(digits=3)
png(filename="pfilter-%02d.png",res=100)

set.seed(789744859)

library(circumstance)
library(tidyr)
library(ggplot2)
library(doParallel)
library(doRNG)

registerDoParallel()
registerDoRNG(789744859)

ou2() -> ou2
ou2 %>%
  pfilter(Np=1000,Nrep=6) -> pfs

pfs %>%
  logLik() %>%
  logmeanexp(se=TRUE)

pfs %>%
  as.data.frame() %>%
  head()

ou2 %>%
  pfilter(Np=1000) %>%
  logLik()

pfs %>%
  lapply(simulate) %>%
  setNames(LETTERS[1:6]) %>%
  do.call(c,.) %>%
  pfilter(Nrep=2,Np=200) -> pfs2

pfs2 %>%
  data.frame() %>%
  separate(.id,c("po","rep")) %>%
  ggplot(aes(x=time,y=ess,group=rep,color=rep))+
```

```
    geom_line()+  
    facet_wrap(~po)  
  
registerDoSEQ()  
  
dev.off()
```

# Index

circumstance-package, [1](#)

pfilter, [1](#), [2](#)

pfilter, ANY, missing-method (pfilter), [1](#)

pfilter, ANY, numeric-method (pfilter), [1](#)

pfilter, pomplList, missing-method  
(pfilter), [1](#)

pfilter, pomplList, numeric-method  
(pfilter), [1](#)

pfilter-ANY, missing (pfilter), [1](#)

pfilter-ANY, numeric (pfilter), [1](#)

pfilter-pomplList, missing (pfilter), [1](#)

pfilter-pomplList, numeric (pfilter), [1](#)