

Package ‘ars’

December 18, 2020

Type Package

Title Adaptive Rejection Sampling

Version 0.1.0

Author Brian Collica, Ashish Ramesh, Ben Searchinger

Maintainer Brian Collica <bcollica@berkeley.edu>

Description Implements the Adaptive Rejection Sampling Algorithm introduced by Gilks and Wild (1992).

License MIT + file LICENSE

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

Depends R (>= 3.6.0)

Imports assertthat, rlang, testthat, Deriv, stats, stringr

Suggests testthat

NeedsCompilation no

R topics documented:

ars	1
Index	3

ars	<i>Perform Adaptive Rejection Sampling</i>
-----	--

Description

ars calculates a given number of n random samples from a given density f , initialized at the given abscissae x_{abs} .

Usage

```
ars(n, x_abs = NULL, f, f_params = NULL, supp = c(-Inf, Inf))
```

Arguments

<code>n</code>	The number of samples to return
<code>x_abs</code>	A numeric vector of length <code>k</code> for $k > 1$, representing the abscissae.
<code>f</code>	A function representing the target sampling distribution.
<code>f_params</code>	A list of any associated parameters of <code>f</code> .
<code>supp</code>	The support of <code>f</code> , as a two-membered numeric vector. Default is <code>c(-Inf, Inf)</code>

Value

A named list containing the y-values of the upper hull.

Index

ars, [1](#)