

Package: etrunct (via r-universe)

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Type Package

Title Computes Moments of Univariate Truncated t Distribution

Version 0.1

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Description Computes moments of univariate truncated t distribution.
There is only one exported function, `e_trunct()`, which should
be seen for details.

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Encoding UTF-8

LazyData true

RoxygenNote 5.0.1

Suggests testthat

Repository <https://stephens999.r-universe.dev>

RemoteUrl <https://github.com/stephens999/etrunct>

RemoteRef HEAD

RemoteSha c281440eb8d2f0e00bfb713ef7b7be828bd7ad58

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`e_trunct`*Compute moments of univariate truncated t distribution*

Description

Compute moments of univariate truncated t distribution

Usage

```
e_trunct(a, b, df, r)
```

Arguments

<code>a</code>	the left end of the truncation interval
<code>b</code>	the right end of the truncation interval
<code>df</code>	the degrees of freedom of the t distribution
<code>r</code>	the degree of moment to compute

Details

This function computes the r-th moment of the univariate t distribution on df degrees of freedom, truncated to the interval (a,b). If parameters are vectors then the r[i]th moment is computed for each (a[i],b[i],v[i]). The methods are based on results in O'Hagan (1973) and work for $df > r$. Otherwise NaN is returned.

References

O'Hagan, A. (1973) Bayes estimation of a convex quadratic. *Biometrika* **60** (3).

Examples

```
e_trunct(-3,3,3,2) # second moment of t distribution on 3df truncated to (-3,3)
e_trunct(-2,2,4,1) # first moment, should be 0 by symmetry

e_trunct(c(-3,-2),c(3,2),c(3,4),c(2,1)) # the function is vectorized
```

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