Package ‘etrunct’

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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.

Encoding UTF-8

LazyData true

RoxygenNote 5.0.1

Suggests testthat

NeedsCompilation no

Repository CRAN

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R topics documented:

`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

a	the left end of the truncation interval
b	the right end of the truncation interval
df	the degrees of freedom of the t distribution
r	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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