Package 'mnormpow'

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Title Multivariate Normal Distributions with Power Integrand

Depends R (>= 2.2.0)

Description Computes integral of f(x)*x_i^k on a product of intervals,
where f is the density of a gaussian law.
This a is small alteration of the mnormt code from A. Genz and A. Azzalini.

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R topics documented:

`mnormpow` *Univariate partial moments of the multivariate normal distribution*

Description

Computes the integral of $f(x)x_i^k$ on a product of intervals, where f is the density probability function of a centered multivariate Gaussian distribution.

Usage

```
imnormpow(lower,upper,varcov,...)
pmnormpow(x,varcov,...)
```

Arguments

x	a vector of length d, where d=ncol(varcov), giving the right-end values for the integral (when using pnormpow, the left-ends are -Inf)
lower,upper	two vectors of length d, where d=ncol(varcov), giving the intervals bounds for integration
varcov	a positive definite matrix representing the variance-covariance matrix of the distribution
...	additional arguments, such as: ipuiss coordinate to be added to the integrand (i) puiss power (k)

See Also

pmnorm

Examples

```
pmnormpow(c(0,0),varcov=matrix(c(4,0,0,2),ncol=2),ipuiss=1,puiss=2)
# =1
```

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