1 Program cdf

1.1 Purpose

This program does various conversions using the cumulative distribution function (cdf) of certain canonical probability functions.

1.2 Usage

Usage 1: **cdf [-v] -t2p statname t params**
Usage 2: **cdf [-v] -p2t statname p params**
Usage 3: **cdf [-v] -t2z statname t params**

1.3 Options

The optional '**-v**' indicates to be verbose – this is for debugging purposes, mostly.

Usage 1: Converts a statistic 't' to a tail probability.
Usage 2: Converts a tail probability 'p' to a statistic.
Usage 3: Converts a statistic 't' to a N(0,1) value (or z-score)
that has the same tail probability.

The parameter 'statname' refers to the type of distribution to be used. The numbers in the params list are the auxiliary parameters for the particular distribution. The following table shows the available distribution functions and their parameters:

statname	Description	PARAMETERS
fico	Cor	Samples, Fit-Parameters, Ort-Parameters
fitt	Ttest	Degrees-of-Freedom
fift	Ftest	Numerator and Denominator Degrees-of-Freedom
fizt	Ztest	N/A
fict	ChiSq	Degrees-of-Freedom
fibt	Beta	Alpha and Beta (exponenents)
fibn	Binom	Number-of-Trials and Probability-per-Trial
figt	Gamma	Shape and Scale
fipt	Poisson	Mean