Implementation of Software for Distributions in R

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Distributions are fundamental to statistics and the implementation of them in software is likewise of extreme importance. Many distributions are implemented in R packages and an overview is given in a CRAN Task View, see Dutang (2009). In this talk we give suggestions for a standardized approach to the implementation of software for distributions. We discuss the functions which should be available in addition to the usual d-p-q-r functions; a possible standard naming system; suggested return structures for functions such as fitting routines; and appropriate testing procedures, focussing on unit tests. The package VarianceGamma which is currently being prepared exemplifies these ideas.

References

Dutang, Christophe (2009). CRAN Task View: Probability Distributions, `http://cran.r-project.org/web/views/Distributions.html`.