Computing Percentage Points of the Largest Among Student’s T Random Variables

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Abstract: An approach is proposed for computing the percentile points of the maximum of $k$ independent Student’s $t$ random variables. A simple program in R (a freely downloadable statistical software) is presented and its performance compared with other known approaches. Similar programs are presented for computing the percentile points of the componentwise maximum of $k$-variate $t$ and $k$-variate normal vectors. The time efficiency of the programs is discussed.

Keywords: Student’s $t$ distribution, Multivariate normal distribution, Multivariate $t$ distribution, R

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