

#### Simple Interactive Statistical Analysis

# 22 Distributions.

### Input.

The statistical distribution spreadsheets can only be used if you have Ms Excel installed on your computer. The spreadsheets also seem to work fine in open office. Please "click" the links to the spreadsheets below. If your computer is configured in the right way the spreadsheets will be loaded automatically into excel, otherwise save the spreadsheets and open them as an excel file.

The spreadsheets give the value of various parameters for the statistical distributions concerned, depending on the shape and scale of the distribution as defined by the user. A graph that shows you the current distribution is also displayed. All turquoise (a sort of medium blue) fields can be changed. You can do that with two purposes, to change the shape or scale of the distribution you are interested in, or to get the spreadsheet to give you the value of parameters at a user defined point in the distribution. The best way to get to know the spreadsheets and the way they work is to play around with the spreadsheets, changing the turquoise fields in various ways, and to then see what happens in the other fields and the statistical distribution graph.

### Spreadsheets Available.

Beta Distribution **Binomial Distribution Chi-Square Distribution** Discrete Uniform Distribution Gamma Distribution

Geometric Distribution

Hypergeometric Distribution

Multivariate Hypergeometric Distribution

Laplace Distribution

Logistic Distribution

Multinomial Distribution

Negative Binomial Distribution

Normal Distribution

**Bivariate Normal Distribution** 

Log-normal Distribution

Pareto Distribution

Poisson Distribution

Rectangular distribution

Snedecor F Distribution

Student-t Distribution

Triangular Distribution

Weibull Distribution

Download all spreadsheets in one go as a zipped file

### Further Reading.

Fernández-Abascal H. et al. *Cálculo de probabilidades y Estadística*. Barcelona: Ariel 1994.

Johnson, N.L., Kotz, S. & Kemp, A.W. *Univariate Discrete Distributions, Vol 1.* New York: John Wiley & Sons 1st. Edition, 1993

Johnson, N.L., Kotz, S. & Balakrishnan, N. *Continuous Univariate Distributions, Vol 1*, New York: John Wiley & Sons 2<sup>nd</sup> edition, 1994

Johnson, N.L., Kotz, S. & Balakrishnan, N. Continuous Univariate Distributions, Vol 2, New York: John Wiley & Sons 2<sup>nd</sup> edition, 1995

Johnson, N.L., Kotz, S. & Balakrishnan, N. Discrete Multivariate Distributions New York: John Wiley & Sons 1st. edition, 1997

Kotz, S., Balakrishnan, N. & Johnson, N.L. Continuous Multivariate Distributions, Volume 1, Models and Applications. New York: John Wiley &

Sons 1<sup>st</sup>. edition, 2000

## TOP of page

Dr J.L. Rojo, Department of Applied Economics, University of Valladolid has made the spreadsheets available for teaching purposes only. They are the sole property of Dr. Rojo. Please contact Dr Rojo if you have any questions regarding these spreadsheets. Any E-mail addressed to Dr.Rojo will be forwarded.

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