LIKPAK 1.0

By Econotron Software

www.econotron.com

GAUSS™

Features:

- AR Processes
- Count Processes
- Discrete Processes
- GARCH Processes
- Statistical Processes
- Other Processes
- LikPak Utilities
- DS Utilities
- PV Utilities

Requirements:

Requires GAUSS Mathematical and Statistical System (GAUSS) 4.0+ or GAUSS Engine 4.0+

Platforms:

Available for Windows, LINUX, Mac OS X and UNIX (Sun SPARC and HPUX11)

LikPak 1.0

LikPak is a new product by Econtron Software for use with the GAUSS™ Mathematical and Statistical Systems software.

LikPak provides a set of GAUSS likelihood procedures that are commonly used in econometrics, and show, by example, how a model can be parameterized using these likelihoods.Thus LikPak is the perfect companion to an optimization package, such as MaxLik, MaxlikMT or CMLMT.

LikPak is designed to be used as a template—that is, you select the example that is relevant to your problem and use that example as a starting point. There are over 50 likelihood functions in the LikPak package, corresponding to the set of likelihoods currently used in economics. Each example is backed up with documentation describing typical parameterizations. In addition, since there are a number of different optimization tools available, these examples are repeated for each optimization tool.

Other features include both truncation and censoring for statistical functions. For least squares problems, LikPak provides the NLS command for single and multiple non-linear equation systems. For languages requiring structures, LikPak provides a set of (optional) PV and DS commands that simplify the use of the PV and DS structures, as well as facilitating passing options. And additional utilities are provided for data generation, filtering, Gibbs sampling, and constraining parameters

The source code is written in GAUSS, and will run on any version of GAUSS or the GAUSS Engine. Full documentation and examples are provided for each function; for details, see the online manual at http://www.econotron.com/likpak

Processes and Utilities

AR Processes

ARFIMA	Autoregressive fractional integrated moving average process
ARIMA	Autoregressive integrated moving average process
ARMA	Autoregressive moving average process
VARMA	Vector autoregressive moving average process

Count Processes

NEGBIN	Negative binomial process
POISSON	Poisson process

Discrete Processes

DBDC	Double-bounded dichotomous choice process
FMNP	Feasible multinomial probit
LOGIT	Binomial logit process
MNL	Multinomial logit
MNP	Multinomial probit

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Processes and Utilities (continued)

Discrete Processes (continued)

ORDLGT	Ordered logit process
ORDPRBT	Ordered probit process
PROBIT	Binomial multivariate probit process

GARCH Processes

AGARCH	Asymmetric GARCH process
ARCH	Autoregressive conditional heteroscedastic process
EGARCH	Exponential GARCH process
FIGARCH	Fractionally integrated GARCH process
GARCH	GARCH process
IGARCH	Integrated GARCH process
MGARCH	Multivariate GARCH process
PGARCH	Power GARCH process
TGARCH	Truncated GARCH process

Statistical Processes

BETA	Beta process
CAUCHY	Cauchy process
EXPON	Exponential process
F	F process
GAMMA	Gamma process
GUMBEL	Gumbel (largest extreme value) process
INVGAUSS	Inverse Gaussian process
LAPLACE	Laplace process
LEVY	Levy process
LOGISTIC	Logistic process
LOGLOG	Loglogistice process
LOGNORM	Log normal process
NORMAL	Normal process
PARETO	Pareto process
PEARSON	Pearson
SEV	Smallest extreme value process
STUDENTS_T	Student's T process
VONMISES	Von Mises process
WEIBULL	Weibull process

Other Processes

BOXCOX	BoxCox process
FPF	Frontier production function process
KALMAN	Kalman filter
MSM	Markov switching models
MVN	Multivariate normal process
NEURAL	Neural network process
NLS	Non linear least squares
NPE	Non parametric estimate
SV	Stochastic volatility process
TOBIT	Tobit process
WHITTLE	Local Whittle process

LikPak Utilities

CENSORED	Censored process
DGP	Data generation process
FILTER	Data filter
MROOT	Largest root
PDROOT	Positive definite test for smallest root
QDFN	Multivariate normal rectangular probabilities
RNDTN	Truncated multivariate normal random numbers
TRUNCATED	Truncated process

DS Utilities

dsDATA	Set data source
dsDATAGET	Retrieve data
dsOPTIONS	Set options
dsOPTIONGET	Retrieve options

PV Utilities

pvCLEAR	Clear parameter
pvCONST	Set parameter as inactive
pvGET	Retrieve parameter
pvGETMASK	Retrieve parameter mask
pvPARAM	Set parameter as active
pvSET	Set parameter
pvSETMASK	Set parameter mask

Econotron Software

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http://www.Aptech.com