Maximum Likelihood 5.0 Update

Now Available!

The GAUSS Maximum Likelihood Module Contains:

- **BFGS, DFP, Newton, BHHH, PCRG, and steepest descent optimization methods for maximum likelihood estimation.**
- **Methods for statistical inference include Wald, Quasi-maximum likelihood, profile likelihood, bootstrap, and Bayesian (using the weighted likelihood bootstrap method).**
- **Limited dependent variable model estimation, including exponential, exponential gamma, and Pareto duration models with or without censoring, Poisson, truncated Poisson, hurdle Poisson, seemingly unrelated regression Poisson, and latent variable Poisson models.**
- **Numerous examples, including Tobit, nonlinear curve fitting, simultaneous equations and factor analysis models.**

New Features & Enhancements

• SPEED: New Fast Procedures

FASTMAX, FASTBoot, FASTBayes, FASTProfile, and FASTPFLCL are fast versions of the Maximum Likelihood procedures designed for speed on production runs. Depending on the type of problem, you can expect speedups from 10 to 800 percent. The speed improvement is dramatic for problems that have difficulty converging. With the new FAST procedures, the data must be completely storable in RAM; no keyboard input is allowed during the iterations; and iteration information is not printed to the screen. The following benchmarks were obtained for a Garch model with 257 observations:

Maxlik 4.0 on GAUSS 3.2 - 87.91 seconds
Maxlik 4.0 on GAUSS 3.6 - 68.11 seconds
Maxlik 5.0 on GAUSS 3.6 - 10.73 seconds

An 800% speedup over Maxlik 4.0 on GAUSS 3.2!

• New Random Numbers

The bootstrap procedures and the random line search algorithm implement the new "Kiss-Monster" random number generator that comes with Gauss 3.6. This generator has a period of 2^3859, long enough for any serious Monte Carlo work.

Requirements: Requires GAUSS version 3.6.

Platforms: Available for GAUSS For Windows, LINUX and UNIX.

GAUSS™