

**Here's what Experts say
about GAUSS:**

"Unprecedented in scope, flexibility and power." Peter J. Doulton, Journal of Economic Surveys

"GAUSS is an example of true craftsmanship. For fast numerical computations, modeling, estimation or sophisticated statistical analysis, GAUSS is a tool worth having." Willy Hereman, Physics World Magazine

"...GAUSS is the jaguar of matrix programming languages. Fast, efficient, and incredibly powerful, simplifies estimation and assessing statistical properties. GAUSS is a 'must-have' tool for anyone that needs to manipulate matrices." Sam Ouliaris, IMF



**Mathematical &
Statistical Program**

*Fast Program Development
Fast Execution
Fast Results!*

Program the way you think

- Logically and mathematically
- Interactive or batch
- Real, complex, and character matrices
- Quickly test code / Quickly revise code

Written in C

- Optimized for matrices
- Fast execution

Debugger

- Step into and over procedures.
- Run to a line, a breakpoint, or a procedure.
- Execute a certain number of steps.
- Set watches.

Foreign Language Interface

- Call dynamically linked libraries created in C, C++, and Fortran

Statistics ♦ Finance ♦ Econometrics ♦ Engineering ♦ Physics ♦ Linear Algebra ♦ Simulation

- 2-stage and 3-stage least squares
- ARIMA, ARFIMA
- Bessel functions
- Cluster analysis
- Cointegration
- FAST constrained maximum likelihood
- Constrained optimization
- Contingency table analysis
- Control systems
- Cumulative distribution functions
- Decompositions (SVD, Schur)
- Descriptive statistics
- Differential equations
- Discrete choice models
- Discrete event simulation
- Eigensystems
- Equations solving – linear and nonlinear
- Factorizations (QR, Cholesky, LU)
- Fast fourier transforms - 1 and 2D
- GARCH, ARMAGARCH, FIGARCH, EGARCH, DV-GARCH, BEKK-GARCH
- Generalized SVD, Schur, eigenvalues
- Kalman filters
- Long period random number generators
- Linear, quadratic, nonlinear programming
- Logit - multinomial and ordered
- FAST maximum likelihood
- Neural networks
- Nonlinear curve fitting
- Nonparametric analysis
- Optimization
- Options pricing, Greeks, implied volatility
- Panel data analysis
- Portfolio optimization
- Probit - binomial and ordered
- Rational expectations
- Sparse solver
- Spectral analysis
- State-space time series
- Structures
- Time series
- Tobit
- VAR, VARMAX
- Volatility estimation
- Wavelet and wavelet packet analysis

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