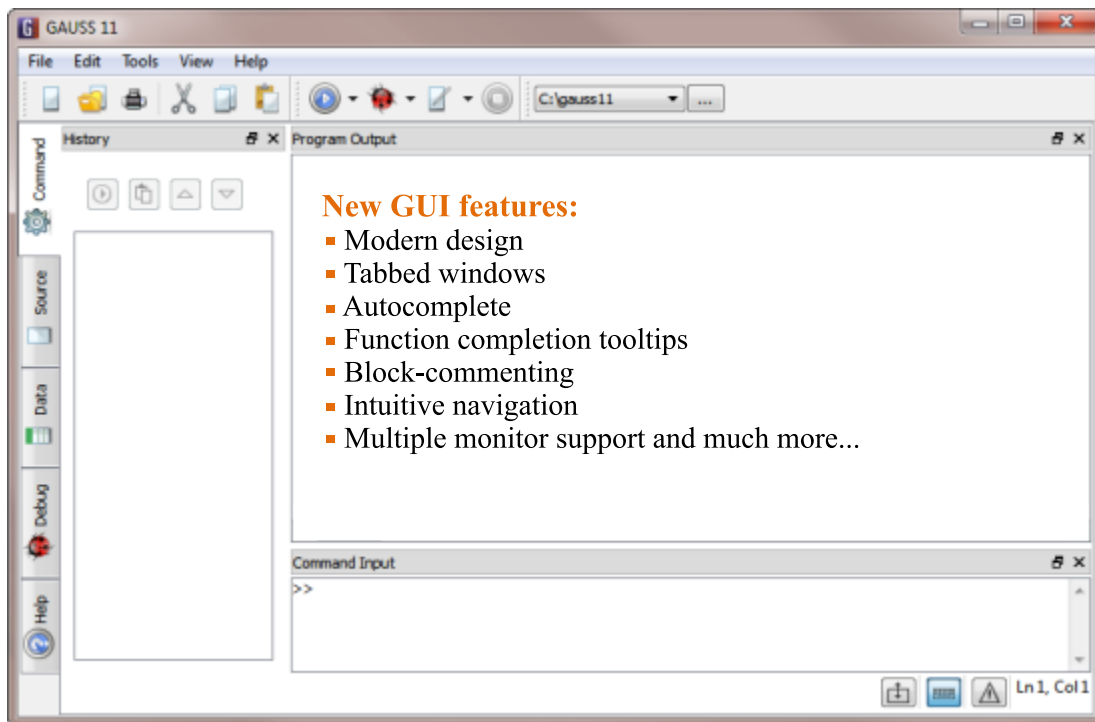


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# Introducing GAUSS 11

- ✓ Completely redesigned Graphical User Interface
- ✓ Dramatic Speed Increases
- ✓ New Functionality



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**GAUSS**™

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## Time Trials\*

		Time (sec)			
		GAUSS 10	GAUSS 11		
Function	Input Size**	1 thread	1 thread	2 threads	4 threads
LU factorization	x = 2000x2000	18.17	0.79	0.59	0.43
Cholesky factorization	x = 2500x2500	7.58	0.69	0.39	0.20
Matrix multiply x*y	x = 2000x2000 y = 2000x2000	9.54	1.64	0.85	0.46
Linear solve y/x	x = 1500x1500 y = 1500x1500	65.1	1.06	0.62	0.37
Matrix inversion	x = 1500x1500	3.26	0.9	0.53	0.38
Eigenvalue and eigenvectors	x = 800x800	10.71	2.04	1.93	1.91

\* Performance data gathered on a Linux server running SUSE 11.0 with a quadcore 2.66 Ghz Intel Xeon CPU, model number E5430 and 8 GB of RAM

\*\* Random data from function rndn.

## New Functions

Mersenne-Twister random number generator.

Inverse error function and inverse complimentary error function.

### Cumulative Distribution Functions

- Binomial
- Negative binomial
- Poisson

### Quantile Functions

- Beta
- Binomial
- Noncentral-f
- Negative binomial
- Poisson

## Improved Functions

### Probability and Statistics

- CDF Beta
- CDF Noncentral-chisquare
- CDF Normal
- CDF Normal Inverse
- CDF Noncentral-t
- Error function
- Complimentary error function

### Linear Algebra

- Cholesky and LU factorization
- All eigenvalues functions
- Matrix multiply, linear solve, ordinary least squares and more...