

# SYSTAT 13

More Statistics, More Graphs, Less Effort!

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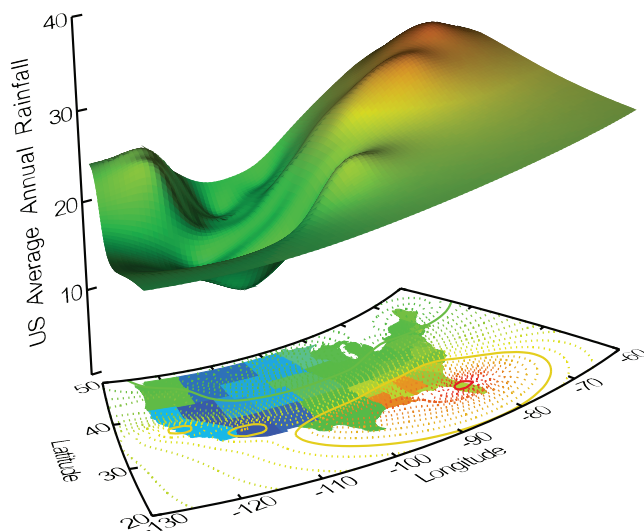
## Results You Can Trust, a Price You Can Afford

SYSTAT is a comprehensive desktop statistics package that is simple enough for beginners, yet powerful enough for experts. It gives you a broad portfolio of complex statistical methods – with robust simulation and scripting capabilities – all inside a customizable and user-friendly interface.

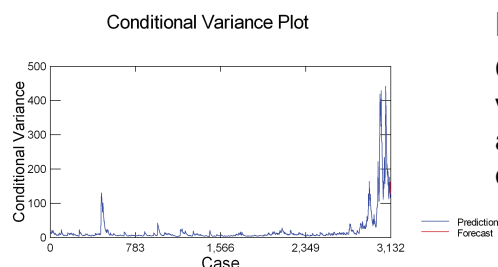
SYSTAT 13 is quicker, sturdier and more robust than any of its predecessors. Newly improved data handling functionality allows the software to process larger data sets, at speeds faster than ever before.

SYSTAT's well-known 2D and 3D graphics are better than ever, this time with greater control and more colors to choose from, giving punch to your presentations and publications.

Take a look at all that SYSTAT 13 has to offer.



## EVEN MORE STATISTICS...



### Forecast Time Series Error Variance with ARCH and GARCH

Conventional time series and econometric models assume that the conditional variance of a series is consistent over time, which may not always be true. ARCH and GARCH models use the past disturbances and variances in your time series data to accurately describe and account for future volatility.

### Find the Best Predictors with Best Subsets Regression

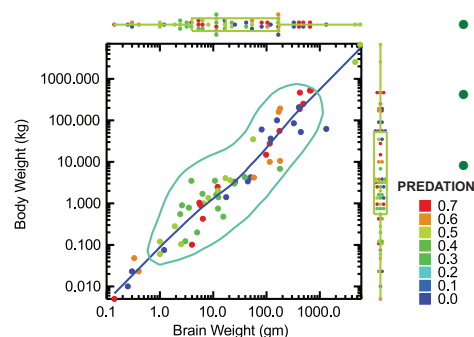
BSR seeks to identify a small number of the best predictors in a trial set. It is especially helpful in situations where it might not be clear which predictors will end up being the most useful, especially in the areas of economics, ecology and the environment.

### Examine the Fitness of Statistical Models Using Confirmatory Factor Analysis

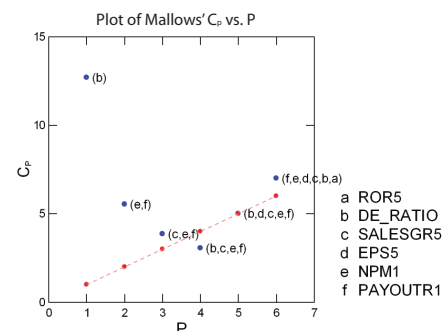
SYSTAT's Confirmatory Factor Analysis makes it easier to develop surveys, and test the fitness of behavioral, economic, marketing and social research models.

### Explore SYSTAT 13's Improvements to Its Existing Statistical Methods

Enjoy more robust testing, regression and cross-tabulation features with SYSTAT 13. Some of the new improvements include:



- Hypothesis testing now includes testing for mean vectors, univariate bootstrapping, and a new column-based input layout.
- Polynomial Regression offers you useful and accurate prediction models for curvilinear-related variables.
- Non-parametric Test Suite now includes:
  - Jonckheere-Terpstra and Flinger-Wolfe tests for structured treatment applications
  - New multiple comparison tests (Dwass-Steel-Critchlow-Flinger, Conover-Inman and Conover)





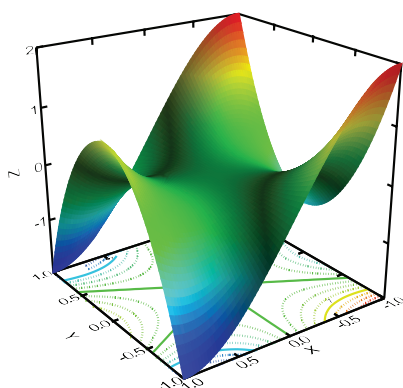
## EVEN MORE GRAPHS...

### Add Polish to Your Research with Stunning 2D and 3D Graphs

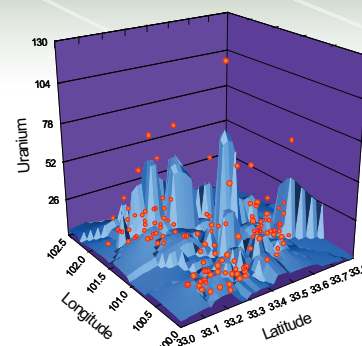
SYSTAT 13 renders visually compelling 2D graphics perfect for publication, and incredible 3D graphics that bring an incredible wow-factor to any research or business presentation.

### Create and Edit Graphs with Ease Using SYSTAT's Graphics Tools

SYSTAT 13 comes packed with new graphical editing features, such as:



- **Richer Color Choices:** Specify any color for your graphs from their red, green and blue component values.
- **New Editing Capabilities:** Edit graph size, color, axes, legends, border display, etc. using interactive dialog boxes.
- **New Color Gradient Editing:** SYSTAT 13 gives you precise control over gradient color and style on 3D graph surfaces.
- **New Graph Labeling Features:** Generate numeric case labels in plots, multivariate displays and maps. Label the dots in dot plots.



## EVEN LESS EFFORT !

### Analyze Larger Data Sets with Greater Speed

SYSTAT 13 has been engineered to handle even larger datasets than before. SYSTAT 13 computes statistical methods up to 10 times faster than older versions on most problems.

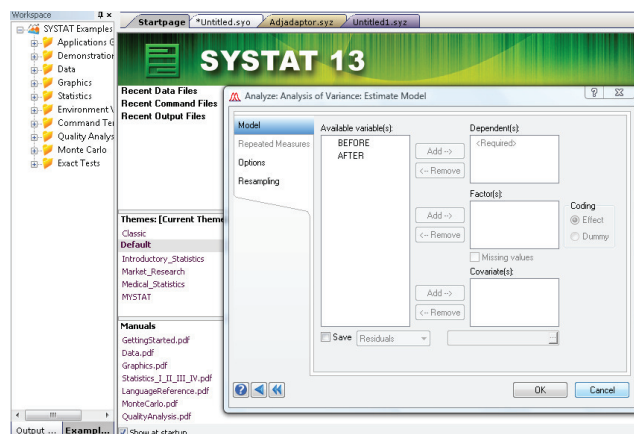
### Speed Up Scripting and Data Entry with Enhanced Auto-complete and Token Dialog

Enter SYSTAT script commands easily and avoid spelling errors with SYSTAT 13's enhanced auto-complete functionality. Get automatic options for file and variable names and option values. Also, SYSTAT 13 features a token dialog, allowing you to select variable value options from drop-down menus during data entry. SYSTAT 13 gives you greater control over the data entry process, drastically reducing entry error.

Case	Label	Total Score	Mean Score	IRT Ability	Standard Error
1	1.000	4.000	0.444	-0.116	0.416
2	1.000	1.000	0.111	-1.524	0.599
3	1.000	1.000	0.111	-1.524	0.599
4	1.000	2.000	0.222	-0.925	0.488
5	1.000	2.000	0.222	-0.925	0.488
6	7.000	1.000	0.111	-1.524	0.599
7	7.000	1.000	0.111	-1.524	0.599
8	7.000	1.000	0.111	-1.524	0.599
9	7.000	1.000	0.111	-1.524	0.599
10	7.000	1.000	0.111	-1.524	0.599
11	7.000	1.000	0.111	-1.524	0.599
12	7.000	1.000	0.111	-1.524	0.599
13	1.000				
	Item	Label	Item P	Difficulty	Standard Error
14	1.000	1 POUNDING	0.897	-1.625	0.192
15	1.000	2 SINKING	0.770	-0.999	0.152
16	1.000	3 SHAKING	0.529	-0.144	0.136
17	1.000	4 NAUSEOUS	0.586	-0.334	0.137
18	1.000	5 STIFF	0.506	-0.069	0.136
19	1.000	6 FAINT	0.414	0.238	0.138
	7 TREMOR	0.333	0.526	0.145	
	8 SHIVER	0.161	1.315	0.185	
	9 WEAK	0.034	2.501	0.331	

### Secure Your Work with SYSTAT's Rescue Report

Rescue Report saves your data, commands and outputs in the event of a system crash or reboot. With the Rescue Report Dialog, you receive options on restoring your session. Also, your data, command and output files will be automatically attached to an email so that the SYSTAT support team can provide you with fast help.



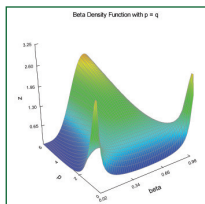
### Experience the Enhanced Look and Feel

SYSTAT 13 features a completely rebuilt data editor which gives you greater control and flicker-free viewing. Also, a Data Navigation Toolbar has been added to allow you to jump easily to any desired case of any specific variable. The SYSTAT interface and dialog boxes have been updated to give you a better overall user experience.

### Customize SYSTAT Menus and Configuration with New Themes

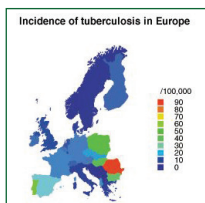
Choosing from SYSTAT's pre-configured themes is easier than ever. SYSTAT 13 displays all themes available for download, and gives expanded information on each theme. Choose from one of our many options, or configure your own customized look and feel.

# SYSTAT Supports All Types of Scientific and Technical Research



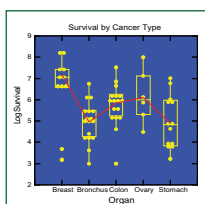
## Statistics: Theoretical Distributions

SYSTAT offers density, cumulative, inverse and random number functions for 28 distributions, fitting of 25 distributions and random sampling of 33 distributions.



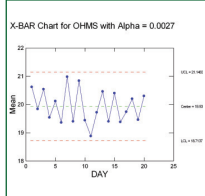
## Epidemiology: Tuberculosis incidence

SYSTAT lets you combine geographic and statistical data to create insightful maps, such as this plot highlighting tuberculosis incidence rates across Europe.



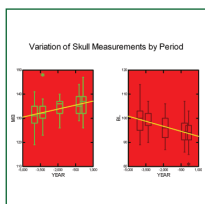
## Medical Research: Clinical Trials

Box plot of selected cancer types was used in part to investigate the effects of supplemental Vitamin C as part of routine cancer treatment. Potential analyses include descriptive statistics, transformations, ANOVA, and survival analysis.



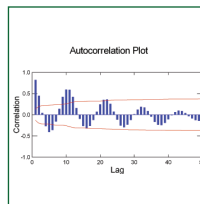
## Manufacturing: Quality Improvement

This X-bar QuickGraph shows the average resistance of five random computer components measured over twenty production days.



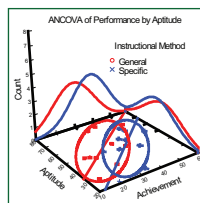
## Archeology: Evolution of skull dimensions

SYSTAT's MANOVA and ANOVA procedures found significant variation between time periods in these measurements of male Egyptian skulls, depicted here in combined regression / box plots.



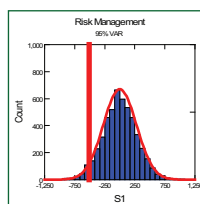
## Astronomy: Sunspot Cycles

Use QuickGraphs to glance at your data before doing in-depth research, such as this autocorrelation chart showing the cyclical patterns displayed by sunspots.



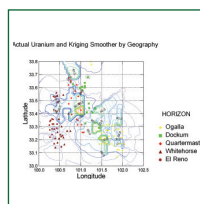
## Psychology: Instructional Method and Learning

SYSTAT's Analysis of Covariance (ANCOVA) helped adjust for the effect of basic aptitude in this experiment comparing two different instructional methods.



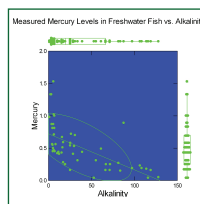
## Banking and Finance: risk management

This histogram of stock portfolio prices was created using SYSTAT's powerful Monte Carlo module to simulate a 5000 case sample size.



## Geology: Uranium Reserves from Ground-water

SYSTAT's spatial statistics Kriging estimator produces a contour overlaid with actual uranium levels to indicate geological concentrations.



## Environmental Science: Mercury Levels in Freshwater Fish

Regression is used here to compare the standard mercury level found in fish versus the Alkalinity of their lake. The box plots on the border of the graph show the distribution of the data, which can be used to identify outliers. Other possible analyses include descriptive statistics, transformations, and correlations.

"I really enjoy SYSTAT 13's new tabbed layout, and the descriptive text pop-ups makes teaching statistics easier."

- Professor Roy Plotnick, University of Illinois at Chicago

"The SYSTAT data editor snaps large data files right into place, and it imports everything. I have no problem reading SAS, SPSS, Excel or any other files, and the straight forward scripting language allows me to write easy macros for importing and organizing raw, unformatted data. Dollar for dollar, you can't buy anything else and get what you get with SYSTAT. You get everything!"

--Dr. Robert Hess, Professor Emeritus, Arizona State University

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