Programi za obradu podataka
• Excel
• SigmaPlot
SigmaPlot
Welcome to SigmaPlot

What would you like SigmaPlot to do?

- Create and Open Notebooks
  - Create new blank notebook
  - Create new notebook from Excel file
  - Create new notebook from database
  - Create new notebook from data on the clipboard
  - Open existing file

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<MORE FILES...>

Getting started
Take a tour of SigmaPlot with our interactive tutorial.

- View tutorial help
- View quick tour movie

Do not show this again

OK  CANCEL  HELP
**Graphs**

**3D Vector - 2 Types**
- Area Plots - 4 Types
- Scatter - 14 types
- Line - 4 types
- Scatter and Line - 10 types
- Step - 8 types
- Vertical Bar - 2 types
- Horizontal Bar - 2 types
- Vertical, Grouped Bar - 2 types
- Horizontal, Grouped Bar - 2 types
- Vertical, Stacked Bar
- Horizontal, Stacked Bar
- Box - 2 types
- Polar - 3 types
- Contour, Line and filled - 2 types
- Histograms - 6 types
- Ternary - 3 types Time-Series

**Error bars**
- Mean, Median, First and Last values for symbols
- Standard deviation, Standard error
- 10th, 25th, 75th, and 90th Percentiles
- Min and Max
- 95% or 99% confidence
- Calculate error bars from replicate values across rows
- User-defined upper and lower error bar values
- One way, two way and asymmetric error bars
- Percentile method: choose between nearest integer (graphical) or value dependent (numerical) algorithms

**Multiline Text Editor**
- Control font, size, style, color, Greek, multiple levels of superscript & subscript, 360 degree rotation, left, right & center justification, and line...
Create Graphs Easily

Pre-formatted Worksheets: Use graph and worksheet displays to design the graph. Entering new data immediately displays the results*

- Graph Style Gallery: Save any graph with all graph properties and add a bitmap image to the gallery to recreate complex graphs
- Graph Toolbar: select toolbar icon of the graph type and style you want to create a graph or to add additional curves to an existing graph
- Graph Wizard: easy to use, step-by-step wizard for helping you select a graph type and pick data
- Default graph settings: set preferences for graph options to create favorite graphs more easily
- Templates: create custom graph page templates to store for easy accessibility and future use
- "Intersections" now supported for area fills
- Improved Graph Wizard: retains last settings, you can click 'Finish Early,' Gallery Graphs are listed

Technical Axes

- Linear
- Log10
- Natural log
- Probit
- Logit
- Probability
- Reverse

- Control mean, standard deviation, standard error, user-defined constants, 95% and 99% confidence intervals
- Up to 5 horizontal or vertical lines
- Control of color, line type, and thickness
- Drop lines
- Display in any or all X, Y, and Z directions

Legends

- Automatic or manually created
- Legends for regressions, confidence, and prediction intervals
- Turn on and off lines and symbols
- Place line and symbol before or after text

Function Plotter

- Plot 2D and 3D functions
- Over 100 2D and 3D built-in, graphically-illustrated equations
- User-defined parameters: scale and range
- Customize the SigmaPlot library of functions or create your own
- Plot functions on new or existing graphs
- Plot multiple different parameter values simultaneously
- Select line properties for each function
- Equation Solver: solve equations or functions containing a single independent variable and any number of parameters
STATISTICS

Major test

- Cox Regression

Minor tests

- Odds Ratio Statistic
- Relative Risk Statistic
- One Sample t-test
- Shapiro-Wilk Normality Test

New Result Graphs

- Anova Profile Plots
- Cox Regression Plots (Cumulative Hazard, Log Log Survival)

24 New Probability Transforms

- Gamma, Weibull, Cauchy, Error, LogNormal, Exponential, Logistic, LogLogistic

More informative Anova messages

Regression Wizard
24 New Probability Transforms

- Gamma, Weibull, Cauchy, Error, LogNormal, Exponential, Logistic, LogLogistic

More informative Anova messages

Regression Wizard

- Linear and nonlinear regressions
- Over 100 built-in, graphically-illustrated equations
- Marquardt-Levenberg algorithm with up to 10 independent variables and 25 parameters
- Define constraints, tolerance, step size and iterations
- Automatically determines your initial parameters
- Writes a complete statistical report to your SigmaPlot Notebook
- Automatically graphs your results on new or existing graphs
- Edit code so you can customize the SigmaPlot library of functions or create your own
- Specify the range for the predicted values output by curve-fitter
- Automatic Linear Regressions
- Up to 10th order with confidence and prediction intervals and regression statistics
- Column Statistics Generated Automatically
  - Size, sum, mean, minimum, maximum, standard deviation, standard error, skewness, minimum positive,
  - number of missing values, and 95% & 99% confidence intervals

Automatic Linear Regressions

- Up to 10th order with confidence and prediction intervals and regression statistics

Column Statistics Generated Automatically

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- number of missing values, and 95% & 99% confidence intervals
- Up to 10th order with confidence and prediction intervals and regression statistics.

**Column Statistics Generated Automatically**

- Size, sum, mean, minimum, maximum, standard deviation, standard error, skewness, minimum positive, number of missing values, and 95% & 99% confidence intervals

**Dynamic Curve Fit Wizard**

- Converged - Those fits that satisfied the convergence criterion.
- Singular Solutions - Those convergent fits whose covariance matrix is singular.
- Ill-Conditioned Solutions - Those convergent fits whose covariance matrix is ill-conditioned (to machine precision).
- Evaluation Failures - Fits that failed to converge due to an evaluation error of the fit equation induced by certain (out of domain) parameter values.
- Iterations Exceeding - Fits that failed to converge after the iteration limit was reached. This user specified limit is inserted into the brackets above.
- Inner-Loop Failures - Fits where the Levenberg-Marquardt parameter has increased above a prescribed value when searching for a parameter direction to decrease the residual sum of squares.
- Performs multiple fits of a single equation to a data set using several sets of starting parameter values randomly selected from specified ranges.
- Improves the likelihood of obtaining the global minimum solution.
- Parameter ranges can be user-defined or computed automatically.
- Worksheet results provide several statistics and performance measures for each fit.
- Creates a Dynamic Fit Profile plot that summarizes the performance of all convergent fits.
- Creates a graph of the raw data with the fit curve that corresponds to the overall best-fit parameters.
- Creates a report containing summary information for all fits and detailed numeric results of the overall best-fit.

**Global Curve Fitting**

- Perform simultaneous fitting of multiple data sets using a single fit equation.
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Global Curve Fitting ★★

- Performs simultaneous fitting of multiple data sets using a single fit equation.
- Optionally share one or more equation parameters across all data sets.
- Several data formats are available to represent your data.
- Creates a graph containing the raw data and the fit curves for each data set.
- Creates a report with numeric results for each data set.

★☆ New Features added in SigmaPlot 11
About SigmaPlot

SigmaPlot 10.0 makes it easier for you to present your findings accurately using precise, publication-quality graphs, data analysis and presentation tools. SigmaPlot 10.0 offers numerous scientific options such as automatic error bars, regression lines, confidence intervals, axis breaks, technical axis scales, non-linear curve fitting and a data worksheet for powerful data handling.

SigmaPlot is a state-of-the-art technical graphing program designed for the Windows platform. It is certified for Windows NT, Windows 2000, Microsoft Office 98, 2000, and Windows XP. SigmaPlot is specifically designed to aid in documenting and publishing research, specializing in the graphical presentation of results.

Creating and editing graphs is easy. Just click a Graph toolbar button, pick your data with the Graph Wizard, and you can create a graph in seconds. You can also use templates to apply favorite graphs again and again.

SigmaPlot 10.0 also includes a powerful nonlinear curve fitter, a huge scientific data worksheet that accommodates large data sets, summary statistics, a mathematical transform language and much more.

OLE2 technology is fully supported. You can annotate graphs with the Microsoft Word Equation Editor, edit your graphs directly inside Word or PowerPoint, or plot your data with an Excel spreadsheet right inside SigmaPlot 10.0.

Related Topics

New Features in SigmaPlot 10.0
Submitting Graphs for Publication

The following are some guidelines for preparing graphs for submission to journals or other printed form. This process is not necessarily simple, and requires understanding both the figure requirements of the publication as well as graphic file formats and terminology.

Related Topics

- Figure Submission Requirements
- Creating Files for Figure Submission
- Why Use EPS?
- Post Processing TIFF Files
- About dpi
- Publication Tips and Tricks
- Publishing Graphs
- Publishing Graphs on the World Wide Web
Introduction

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Toolbars contain buttons for the most commonly used commands.

**Figure 1-3**
Standard Toolbar

**Figure 1-4**
Formatting Toolbar
Figure 1-6

3D Graph Toolbar

3D Scatter Plot  3D Mesh Plot

Contour Plot  3D Line Plot  3D Bar Chart
Figure 1-7
The Page Toolbar parallels Graph Properties functionality.

Viewing Toolbars

- On the View menu, click Toolbars. The Toolbars dialog box appears.
- Select a toolbar to view.
Post break tick interval set to a new value

Y axis break at 75% along the axis length

Error bars using worksheet column data

Bar fill colors use a pattern from a worksheet column

Image art cut from a paint program and pasted onto the page using the Windows Clipboard

Legend symbols and text labels

Grouped bar chart with specified bar and group widths

X axis tick labels using text from a worksheet column
3D Cartesian Graphs include scatter, 3D trajectory and waterfall plots, mesh plots, and bar charts.

The following figures contain examples of these plots, as well as some additional 3D features.
3D features.

- Incremented bar fill colors
- 3D grid lines
- Shaded back planes

Legend:
- Group 1
- Group 2
- Group 3
- Group 4
- Group 5
Worksheet Basics

Worksheets are the containers for the data you analyze and graph. They are spreadsheet-like in appearance but are limited in function, and are column rather than cell oriented.

The following figure provides some worksheet definitions:

Figure 3-1
Example of a SigmaPlot Worksheet

To enter data, you can type in, paste, or import data from other sources. You can also automatically generate and place data in worksheet columns by data transforms and
Sigmaplot automatically calculates a number of basic statistical values for all the data in your worksheet columns. For more information, see “Printing Column Statistics” on page 105.

Figure 3-15
Column Statistics Worksheet

To view the statistics for the currently selected worksheet:

From the menus select:
View
Statistics
highlighting.

*Note:* It is possible to highlight data points only if you create graphs using symbols.

**Figure 3-29**
*When you find the outlier on the graph, click it once to select it, and click it again, but make sure not to double-click.*