

Origin 7.0. OriginLab Corporation, One Roundhouse Plaza, Northampton, MA 01060. 1-800-969-7720. www.OriginLab.com. Suggested Price \$699.00 (Retail, Single User), \$529.00 (Educational, Single User). Contact Company for Other Pricing Options.

Origin 7.0 is the latest release of OriginLab's scientific plotting and analysis software that sports many new features. The system requirements are Microsoft Windows 95, 98, ME, NT (version 4.0 or later), 2000, or XP; a 133 MHz or higher Pentium compatible CPU with at least 64 MB of RAM and a CD-ROM drive; and at least 50 MB of available hard disk space and an SVGA display or better. Internet Explorer 4.0 or later is required to view the compiled HTML help files included with Origin 7.0.

Several file types have been added to the list of those already capable of being imported into Origin 7.0. These include SigmaPlot and MINITAB files, as well as drag and drop abilities for ASCII and Thermo Galactic SPC files. When using this feature, we found, disappointingly, that only the data portion of the files could be imported. This could complicate matters for anyone wishing to port their operations from a competitor's package by requiring that all plots be rebuilt in Origin or that both software packages be maintained: one for old plots and the other for new.

One of the many new features in this latest edition is the ability to import image files as a matrix, displaying them as the graphical image or, numerically, in matrix form. Also inherent in this feature is the ability to do matrix math functions (such as filtering) on the data contained in the image file, permitting the user to process and create various 3D plots from the images. We found this to be an easy feature to use, allowing scientific data collected on a CCD to be manipulated and plotted with minimal effort.

Data analysis is quick and easy with the extensive analysis tools built into Origin 7.0. Linear, polynomial, and sigmoidal fitting, as well as masking, filtering, and smoothing data, are just some of the operations that are supported. Up to 30 peaks can be fit using either Gaussian or Lorentzian techniques. Fast Fourier transforms (FFT) are surprisingly simple and fast; with a few mouse clicks, an FFT plot of your data appears. Custom fits are also possible by defining your own functions that can contain multiple dependent or independent variables.

Another addition in this updated release of Origin 7.0 is that it breaks through the typically proprietary programming languages used in scientific analysis and plotting programs. Origin 7.0 ships with "Origin C", which supports ANSI C (and limited

C++ features) and includes about 300 functions from the Numerical Algorithms Group C library. Programming is accomplished in an Integrated Development Environment and compiled with "CodeBuilder", both reminiscent of Microsoft Visual C++. Refreshingly, a booklet entitled "Programming Guide" is included with the software. Online help files supplement this manual with more detailed information and more advanced topics.

The graphing quality of Origin 7.0 is second to none, easily rivaling other premier data analysis and graphing software packages. The new plotting wizard greatly simplifies the task of converting between numerical data and graphical formats. Particularly easy is the ability to layer graphs onto a single page. This sometimes arduous task in other commercial graphing packages is as easy as clicking a button with Origin 7.0, thereby removing the need to line up discrete plots manually to make them look like a single-layered plot! The editing of graphs has also been simplified with the addition of format and style toolbars and the ability to edit text on the graph itself, rather than in a dialogue box. Furthermore, Origin 7.0 enables exporting the graphs as EPS, JPG, TIF, BMP, and PDF formats (and several other formats) as well as the option to cut and paste into other Windows applications.

Another feature that distinguishes Origin 7.0 from its competitors is the "Project Explorer" window, which easily allows moving from spreadsheet to spreadsheet, spreadsheet to graph, as well as to data analysis window by simply scrolling through the list of files in the Project Explorer and clicking on the desired window. This simple feature reduces frustration when working with large data sets spanning more than a few spreadsheets by empowering the user to change with ease among active windows.

Origin 7.0 emphasizes ease of use without sacrificing functionality and thus is clearly in the top strata of scientific graphing and data analysis programs available today. The breadth of features included in Origin 7.0 will be more than sufficient for the majority of users, and with the ability to compile additional functions in Origin C, this package has limitless possibilities to satiate even the most hardcore user. As a whole, this software package is well worth its cost and in our opinion provides the best value for the money.

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