

Review of OriginPro 8.5

OriginPro 8.5. OriginLab Corporation. One Roundhouse Plaza, Northampton, MA 01060. 1-800-969-7720. www.OriginLab.com. See Web site for pricing information.

OriginPro 8.5 is OriginLab's latest release of its exceptional workbook environment that is integrated with data analysis, scientific plotting, and programming tools. The main features of three previous versions (Origin 7.0, 7.5, and 8.0) have been reviewed earlier (*J. Am. Chem. Soc.* **2003**, 125, 3669; *J. Am. Chem. Soc.* **2004**, 126, 6834; *J. Am. Chem. Soc.* **2009**, 131, 872). This review highlights new or updated features not covered in prior reviews.

OriginPro 8.5 is compatible with Microsoft Windows XP, Windows Vista, and Windows 7 requiring a 1 GHz or higher Pentium-compatible processor, 1024 MB of RAM, 500 MB of disk space, and a DVD drive. It is a 32-bit application and is thus limited to 2 GB RAM. Origin can also be installed on an Intel-based Mac using virtualization software. Internet Explorer 4.01 or later is required to view the HTML help files included with the software. Multimedia tutorials of several of the newly added functions are included along with standard help files to assist user learning. More extensive support in the form of help files, technical articles, a knowledge database, and user forum is provided on Origin's Web site.

For this review, the program was evaluated on a 1.87 GHz Intel Core i7 CPU with 8 GB of RAM running Windows 7. Using the software requires an Internet-based activation step based on a unique ID generated by the software for the user's computer.

The new release of OriginPro 8.5 is an innovative advance of the leading Windows-based data and graphical analysis software. This version includes several new analysis and graphing features for performing statistics, curve fitting, peak analysis, signal processing, and image analysis, as well as for creating high-quality 2D and 3D contour plots and graphs. OriginPro 8.5 is compatible with a wide array of file and image formats and supports interfacing with LabVIEW, MATLAB, Mathematica, and many other software programs.

Although the functionality and sophistication of this software package have been greatly improved, the overall look and feel remain unchanged from previous versions. Key new features provide even more effective and instinctive tools for analyzing and presenting scientific data including a new fitting function wizard, Gadgets for regional statistics using graphical analysis, differentiation and interpolation, enhanced waterfall plots, vector-plot templates, graph transparency control, and gradient color fill to increase contrast and improve presentation clarity. Additional features such as an improved Peak Analyzer wizard, placement of error bars in 3D graphs, and the ability to zoom and pan on worksheets and graphs and embed MS-Word, Excel, and Equation objects into graphs are welcome improvements.

The signal processing and image analysis features of OriginPro 8.5 have evolved as well. Advanced users will benefit from a range of filtering options including Short-Time FFT (STFT), Hilbert

Transform, Coherence, 2D FFT and 2D FFT-based Filtering, 2D Correlation, and Wavelet analysis. Those wishing to incorporate statistical analysis, signal processing, and image analysis in one package will appreciate the inclusion of several built-in tools for treatment of image data, including the adjustment and conversion of images, geometric and arithmetic transformations, morphological and spatial filtering, and interpolated background subtraction.

Overall OriginPro 8.5 preserves its leading status as the most functional and comprehensive data analysis and graphing software on the market. Although other software programs are available, few are as easy to use, assessable, and high-end when it comes to performing rigorous data analysis or producing publication-quality graphs.

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