

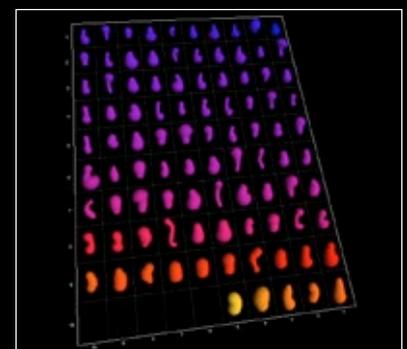
Welcome to the new era of data interpretation, plotting and presentation.

**Imaris Vantage** was created having in mind the need to (a) quickly create explorative and interactive multi-dimensional plots and (b) compare groups of samples (e.g. control vs. test) within the Imaris environment.

Box and Whisker (5-number summary) plots for each object group of interest are present making it possible to draw direct comparisons between the groups / populations. You have the option to use four types of plots: XYZ, Gallery, Time and Scatter Plot. In addition, you can further customize your plots by mapping parameters of interest to the color or scale of the displayed objects.

Use the intuitive Creation Wizard of **ImarisVantage** to navigate through the step-by-step process to create the desired plots. In addition to these new powerful data visualization tools, all the data and views created in **Imaris** can be annotated with individual titles, captions, labels and other highlights for enhancing presentations or publications.

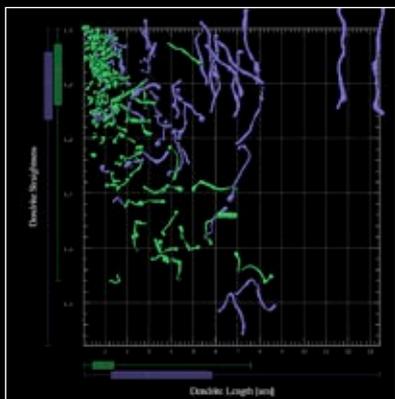
Main image: a 3D Time Plot showing two experimental groups (blue and red). Each axis represents a parameter of interest. Box+Whisker plot in addition to a projection of the 5-number summary are shown in order to help compare the groups.



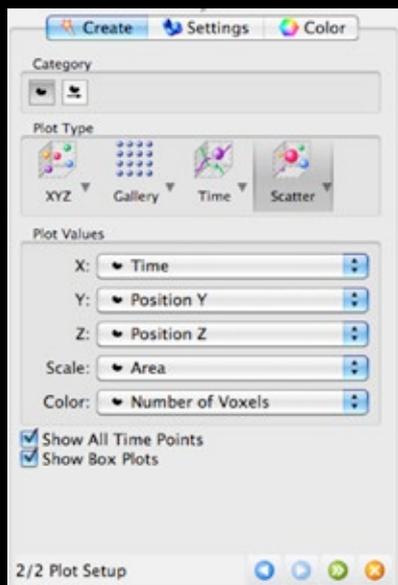
Above: A Gallery view of ImarisVantage displaying individual dendritic spines of a pyramidal cell following analysis and classification in ImarisFilamentTracer. The spines shown here have been plotted in Gallery mode and color-coded according to spine branch depth.

# ImarisVantage

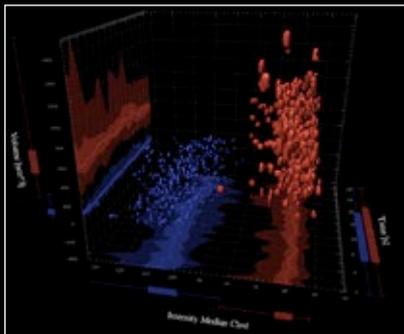
Created for Scientific Discovery



2D Scatter plot with box and whisker plot. In this plot the x axis represents Dendrite Length and the y represents Dendrite Straightness. It is possible to see that the two populations (green and blue) are distinct from each other in respect to Dendrite Length but not Straightness. The green group has higher Dendrite Length than the blue group.



Construction of a plot is intuitive and wizard-driven. Over 20 plot types can be created in ImarisVantage including 3D, Gallery, Time and advanced Scatter plots. With up to five dimensions configurable with the statistics of interest, each plot can be tailored to each user's needs.



3D Time plot with box and whisker plot. In this plot the x axis represents time, y is Intensity Median and z is Volume. It is possible to verify that the two populations (red and blue) are distinct from each other in respect to both parameters plotted. The red population has a higher Volume and Median Intensity in comparison to the blue population.

## Your Benefits

**Compare populations in real time** - plot multiple populations and compare their profile for multiple parameters with the use of the box and whisker box plots (5-number summary).

**Ease of use** - create multiple plots with Spots, Surfaces, Filaments and Cells used as input objects.

**Flexibility** - choose from over 20 possible plots and select more basic 3D data representation or an advanced time or scatter plot.

**In-depth analysis** - modify plots to highlight certain features of the dataset and combine multiple plots for the same analysis.

**Modification** - save plots' creation parameters to reproduce them for other data sets. Change attributes of rendered data in the Settings tab to update the plot display instantaneously.

## Creation of Plots and Figures

- **ImarisVantage** lets you create informative plots that help you represent complex, multi-dimensional data in a way that hidden relationships between parameters, objects and groups of objects (e.g. control vs. test groups) become clear.
- Make use of the box and whisker (5-number summary) plot along with the projection plot for a direct comparison between samples or populations. You can now stay inside the Imaris environment to make a quick plot of your data and get a first sense of its meaning. Imaris Vantage gets you closer to your answer.
- Take control of a vast array of plot options and tailor them to meet your exact analytical needs. Edit and view plots, align and scale objects, remap dimensions, overlay objects with original volume data.
- Create and manage figures for any view of **Imaris** and plot of **ImarisVantage** - each figure will store the current view with user-created arrows, text boxes and frames.
- Add an annotation label to a figure that highlights some detail of the plot. The annotation box can be moved and resized at any time and the description area of the annotation can be closed or expanded.
- For every object that has been segmented within **Imaris**, the user can add statistical annotations that are displayed in 3D/4D space or are added to an **ImarisVantage** plot. Parameters like speed, acceleration, displacement, area, track length and volume can be easily included within the image to create a new figure. A few clicks will let you select an object or objects of interest, select one or more statistical parameters from the extensive statistics list, and **ImarisVantage** inserts the statistical annotation within the image. The statistical

annotations require **ImarisMeasurementPro** (and optional **ImarisTrack** for annotating track objects).

## Navigation and choice of styles

- **ImarisVantage** provides an easy and convenient way to navigate within existing and saved figures. Choose from a range of style possibilities for annotation appearance to adapt output styles to the requirements of the publication.
- Interactive 3D Navigation - the anchor point and the line of an annotation are dynamic and update as the user changes the view or the camera angle. This feature provides amazing usability when changing views or creating movies because the annotations never have to be realigned.
- Save And Reload - save the figures with the 3D image and then reload the figure at a later stage to modify the visualization if necessary. Change the color of the background or modify the point of view of the 3D scene for example.
- Search Function - navigate to an annotation by selecting it in the list or perform a textual search for the annotation based on the title or a keyword.

## Export of Figures and Plots

- **ImarisVantage** provides the necessary tools to export figures and plots easily. Both can be seamlessly imported into your favourite word processing or presentation software.
- Export Tab - the Export tab saves the figure as HTML file. Exported HTML includes snapshot with caption, annotations and image metadata. A plot's numerical data can be exported as .CSV, .XML and .XLS file for further downstream processing.
- Snapshot - the created figure or plot can be exported by creating a snapshot of the current view. You can also choose text color and format from a broad selection of possibilities.

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## Software requirements

**ImarisVantage** requires **Imaris** and **Imaris MeasurementPro** for annotating statistical output. **ImarisTrack** is required for annotating track date objects in 4D.

## Operating system requirement

**ImarisVantage** runs on PCs with Microsoft® Windows® XP, Vista, 7 (32 and 64-bit) and MacOS (10.6 or later).

Windows systems - we recommend using 64-bit OS with 16GB RAM, 3.3 GHz (or faster) quad-core CPU with 64-bit support.

Mac systems - we recommend using Intel 2.8 GHz (or faster) quad-core CPU and 16GB RAM

Graphics boards - ATI/nVidia graphics card with 512 MB RAM. For full list of supported hardware please visit [bitplane.com/go/support/system-requirements](http://bitplane.com/go/support/system-requirements)