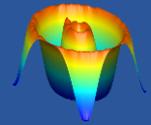


Info to SimplexNumerica

Release Notes for Upgrade V21

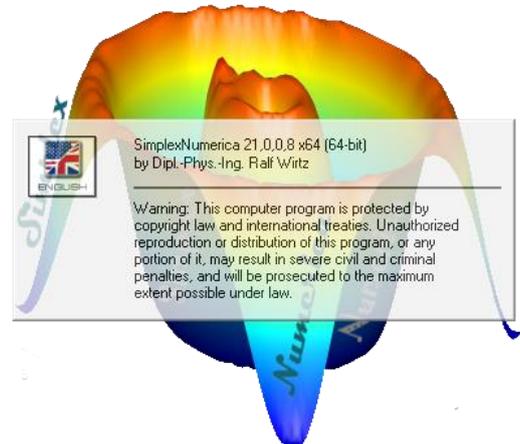


This document describes the enhancements and changes of the brand new SimplexNumerica V21 release.

The new version V21 (= Year 2021) was developed in parallel to the continuously updated version (currently version V18.4.2.3). The numbering for the new version has been updated in the background so that we are now at V21...

License

The license file `<SxN_License_V18.lic>` remains valid also for SimplexNumerica V21!



Download

You can download V21 for 32-bit here:

https://drive.google.com/uc?export=download&id=1rjPBo9NJftaCIVBwutbZtWmPd_apwSaD

You can download V21 for 64-bit here:

https://drive.google.com/uc?export=download&id=12z_wXzDXBRv9L1nlhg-70IbUV_nUGIb8

Afterwards, you can update within the program via 'Live Update...'. But, and that is new, if the program detects during 'Live Update' a major new release version (like V21.x.0.0) then it refers to the download page:

<https://www.simplexnumerica.com/download/>

... or you can use the links above to gather the updated base version!

Hint:

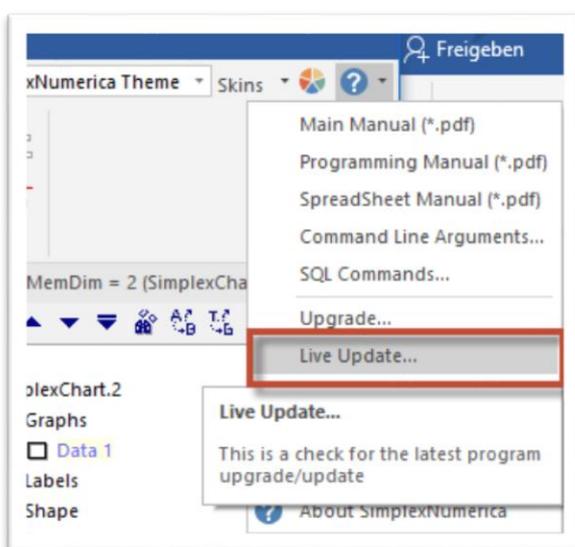
Live Update (Minor new release version, e.g. V21.2.3.4)

You can make a live update from Pulldownmenu Help -> Live Update...

A 'Live Update' only reinstalls the components that have been changed. To do this, however, it needs the right installed base version!

Upgrade (Major new base release version, e.g. V21.1.0.0)

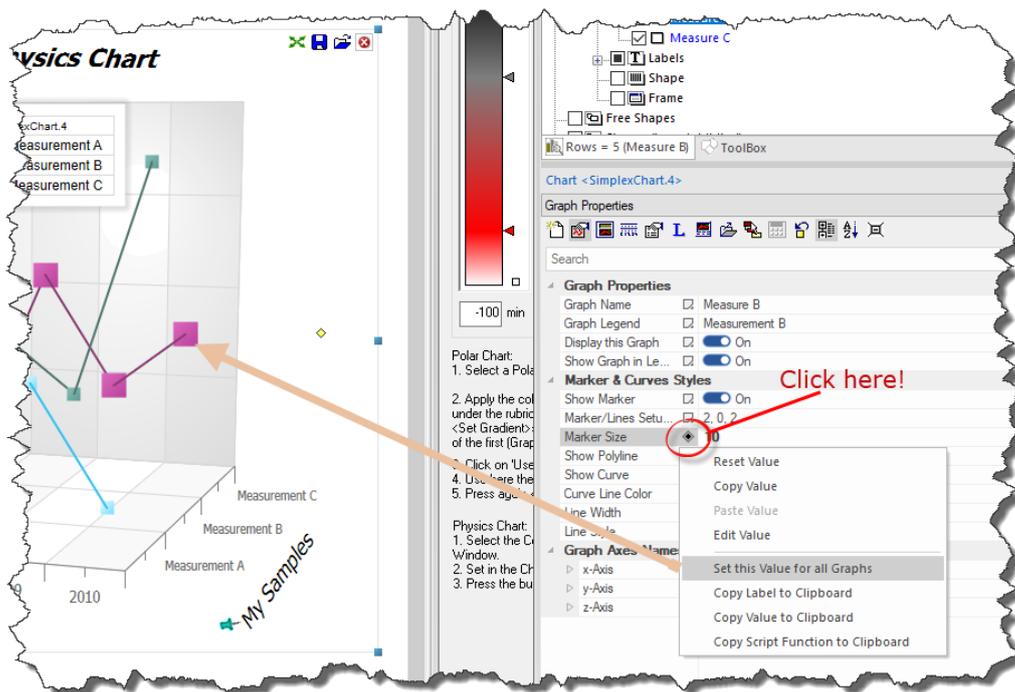
But, if you do an 'Upgrade...' (see on the left picture the menu point above 'Live Update...'), then it loads the latest version in the user folder and starts the installer. If there was found a previous version, then a message box pops-up with the hint to first de-install the previous version. Let the message box open and go to the Control Panel and **de-install the previous version**. Then go next in the installer procedure...



Now, we will come to the new features in SimplexNumerica V21...

Release Notes for Upgrade V21

Set this Value for all Graphs



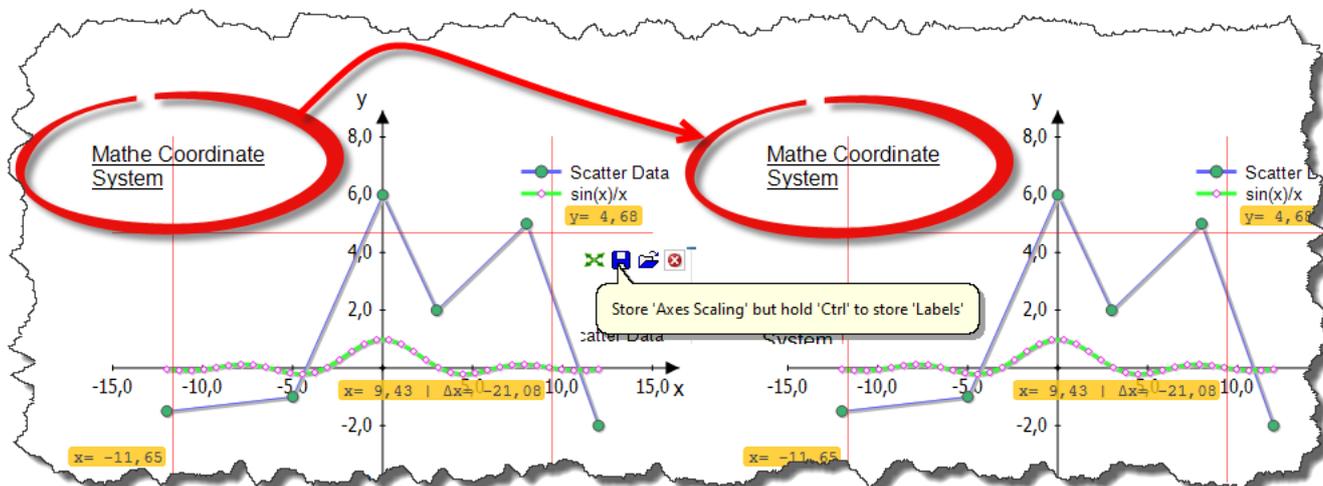
Often you want to set the same value (like the Marker Size) to all Graphs...

You can do that by Left Mouse click on the rhombus icon and choose in the popupmenu the entry **Set this Value for all Graphs**

Store/Load Axes Scaling & Labels

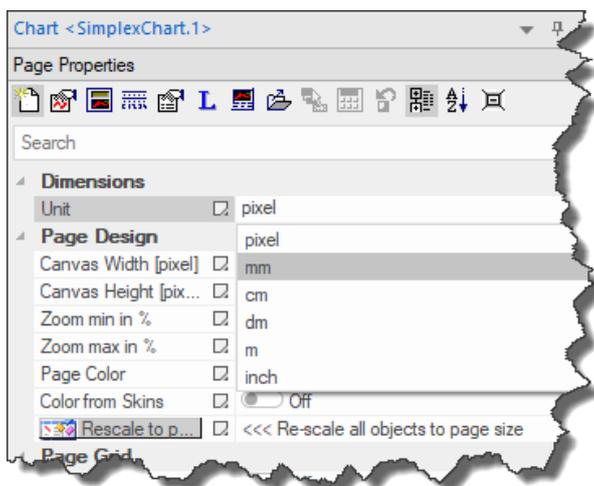
When you have prepared a chart with labels and axes scaling, then you can apply that to other charts, also on other windows/views.

Click on the icon **Store 'Axes Scaling'** but hold 'Ctrl' to store 'Labels' and then on another chart click on the load icon **Load 'Axes Scaling'** but hold 'Ctrl' to load 'Labels'

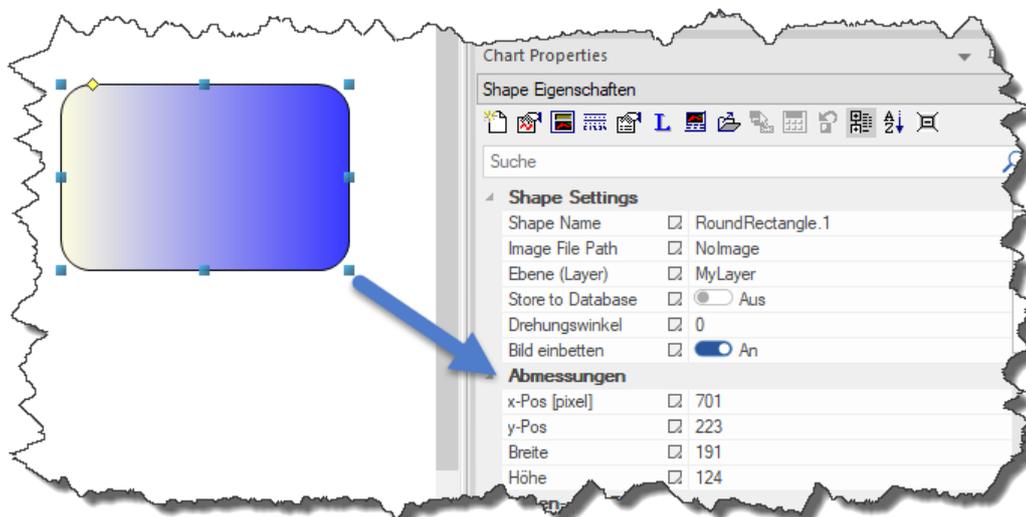


Release Notes for Upgrade V21

Unit of the Dimensions

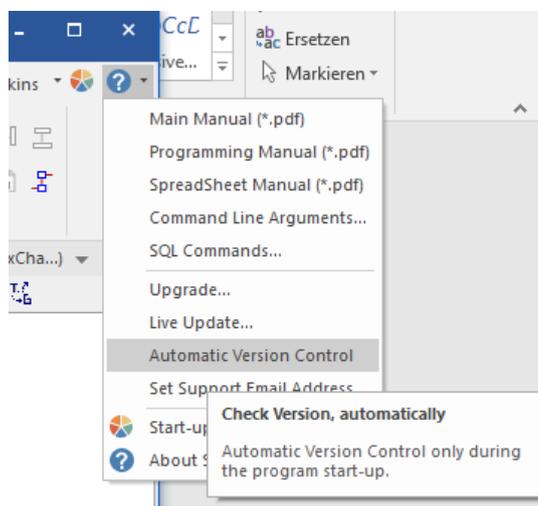


Now, you can set the Units of the shape dimensions in the upper combobox of the page properties.



The adjusted Unit (here pixel) is shown behind the entry „x-Pos“. It is also valid for the other settings.

Automatic Version Control



Checkmark the entry ‚Automatic Version Control‘ if you want to check the latest released program version, automatically.

The program will do that shortly after the program start.

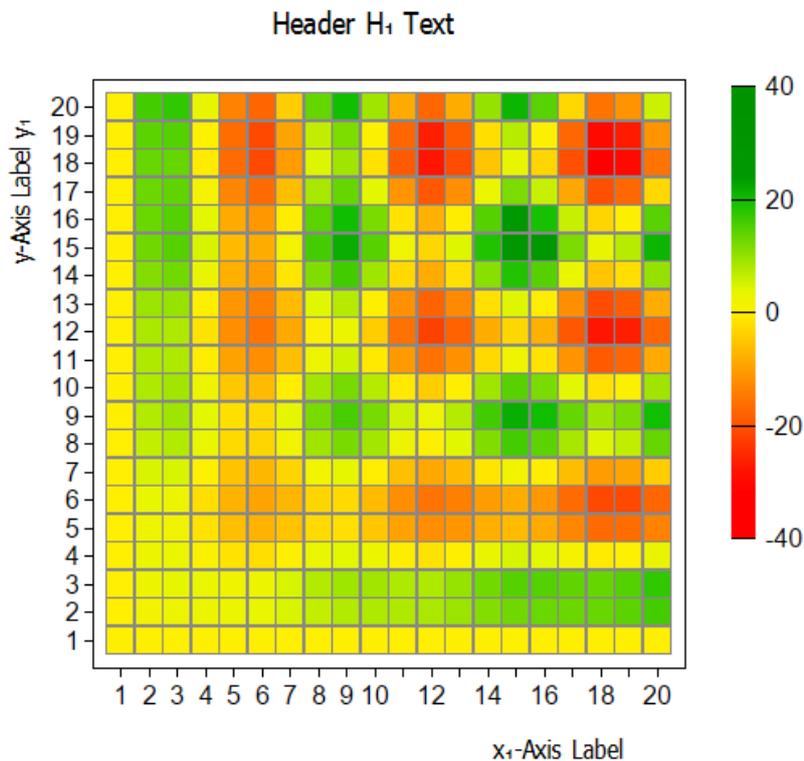
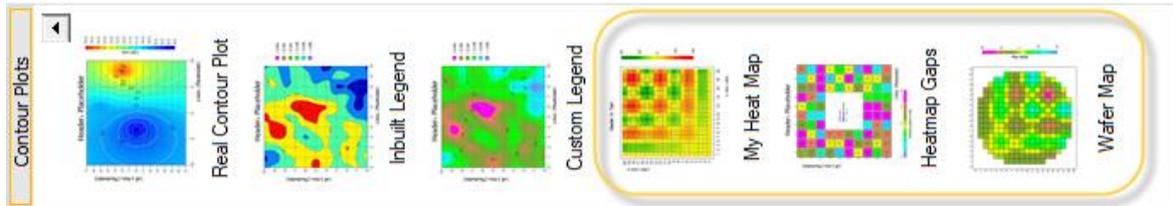
If this entry is not checked, then call the upper update menu points manually.

Release Notes for Upgrade V21

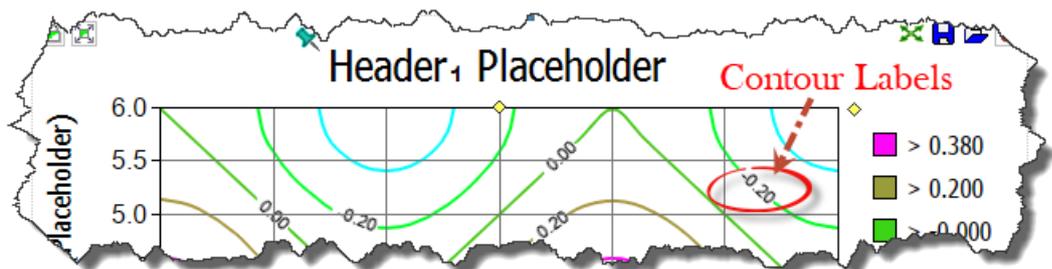
Contour Plots & Heatmaps

A heatmap depicts values for a main variable of interest across two axis variables as a grid of colored squares. The axis variables are divided into ranges like a bar chart or histogram, and each cell's color indicates the value of the main variable in the corresponding cell range.

You can find some heatmaps in the Thumbnail Window [Contour Plots](#)



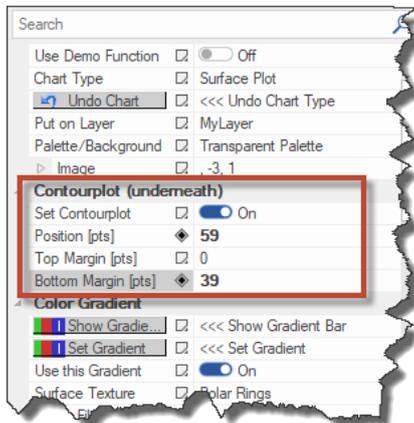
SimplexNumerica can now draw labels along the contours in a contour chart. This allows contour values to be displayed directly on the contours, instead of having to lookup their values based on the underlying colors.



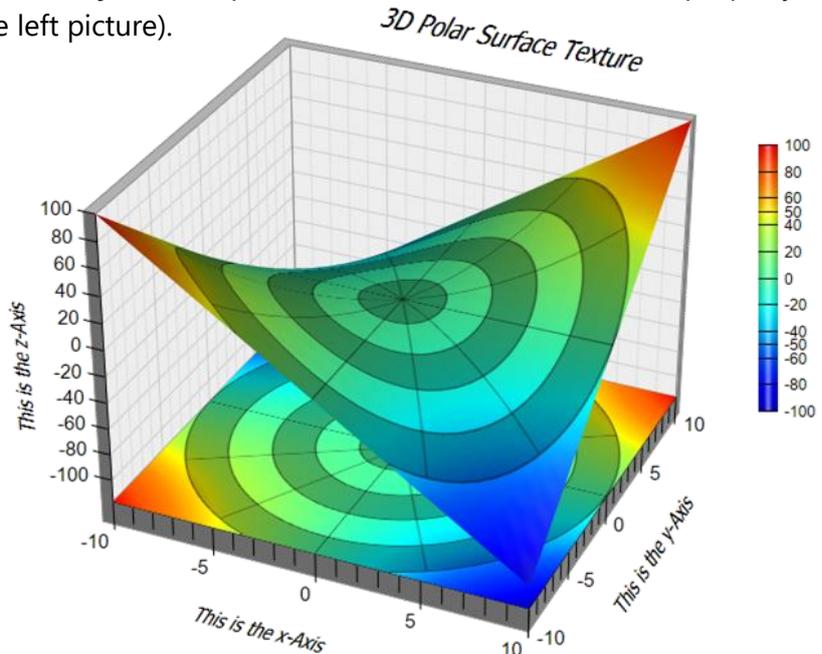
Release Notes for Upgrade V21

Contour Plot under Surface Plot

The projection of a Surface Plot on the XY plane is a Contour Plot. SimplexNumerica can now include the projection on the XY wall of the Surface Plot.

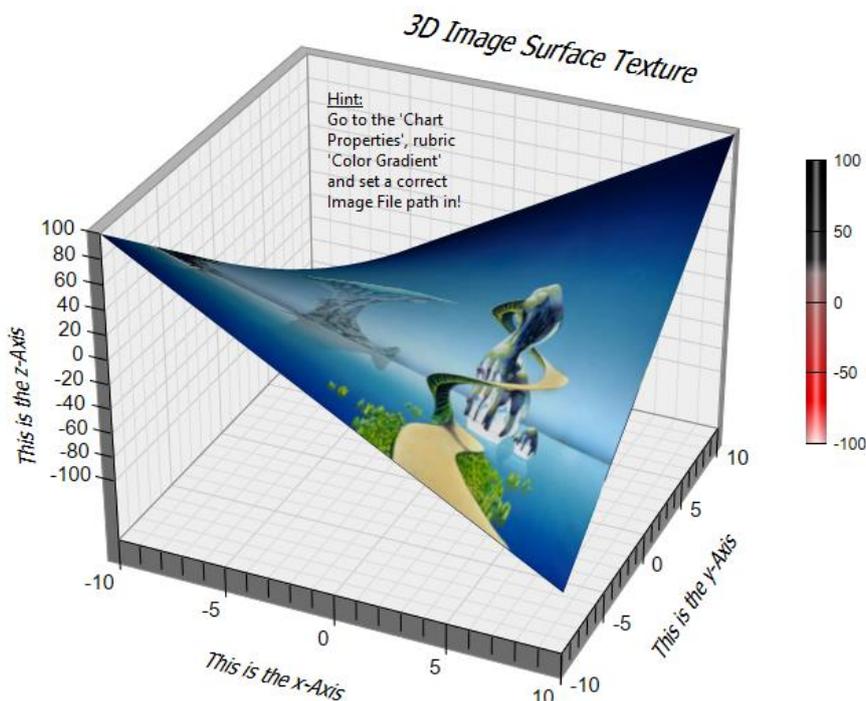


You can adjust the z-position of the Contour Plot in the property section (see left picture).



Surface Texture

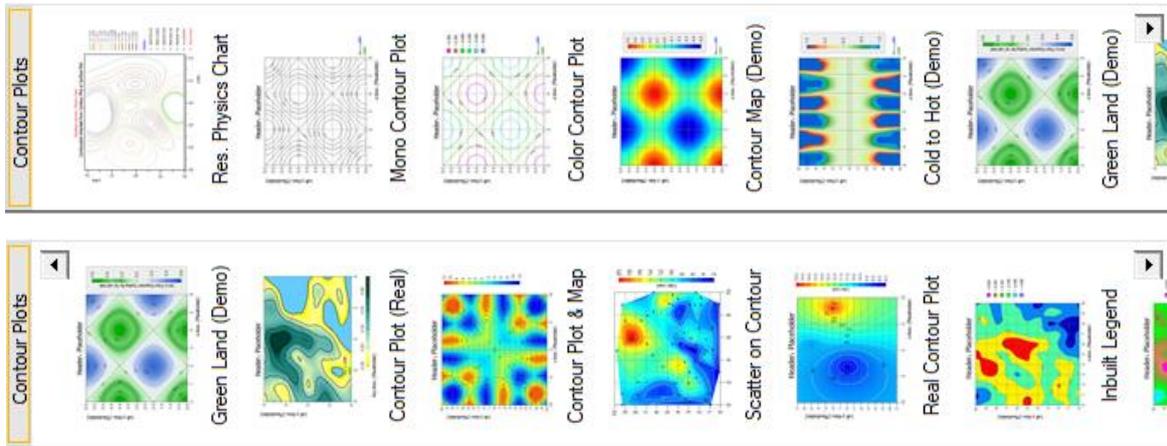
SimplexNumerica now supports drawing a custom image on the surface of a surface chart. The image can be semi-transparent so as not to block the underlying surface. The image can be generated on the fly by loading a user defined image file (from disk). This feature is useful for adding custom annotations on the chart. In the above example it shows a polar chart as the image to include semi-transparent circular zones on the chart.



Release Notes for Upgrade V21

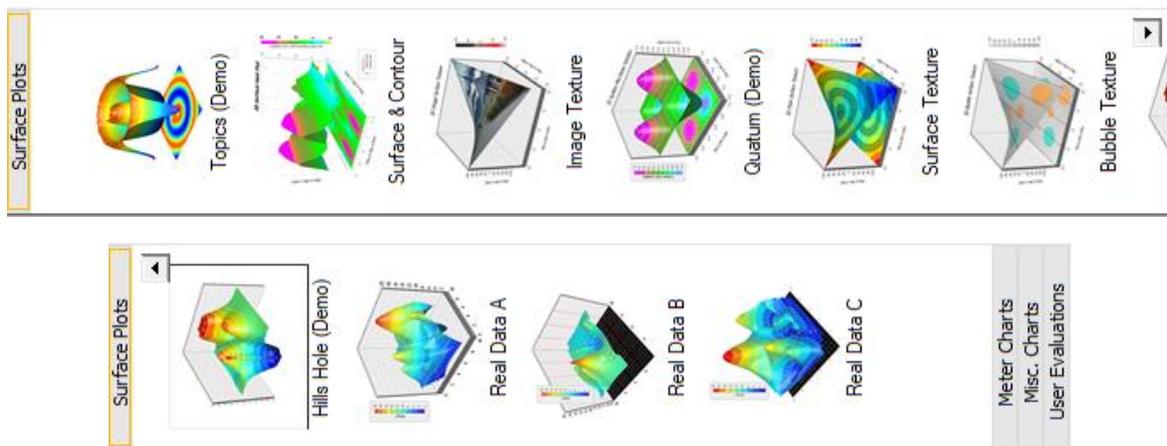
Contour Plot Thumbnails

Here are some of the new Contour Plot thumbnails:

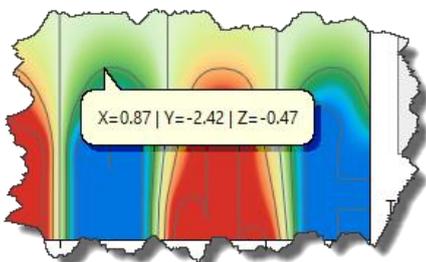


Surface Plot Thumbnails

Here are some of the new Surface Plot thumbnails:



Tooltips



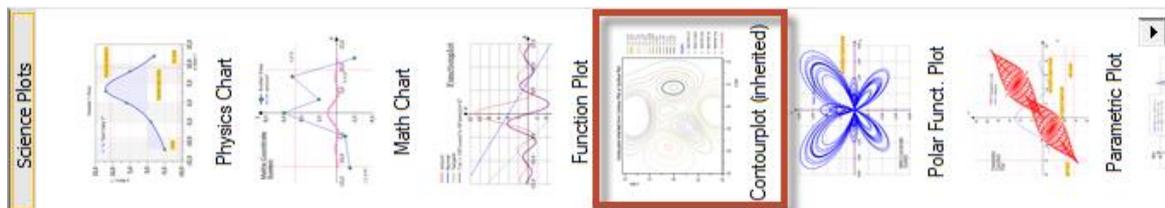
Tooltips for Contour Plots and Surface Plots are available now.

Release Notes for Upgrade V21

Inherited Contour Plot

The disadvantage of the main Contour Plots was (still is) the fact that the contour curves are not accessible as individual graphs.

Now, we made a separate algorithm that converts the contour lines into the *Physics Chart* as separate Graphs. We call that an *Inherited Contour Plot*.



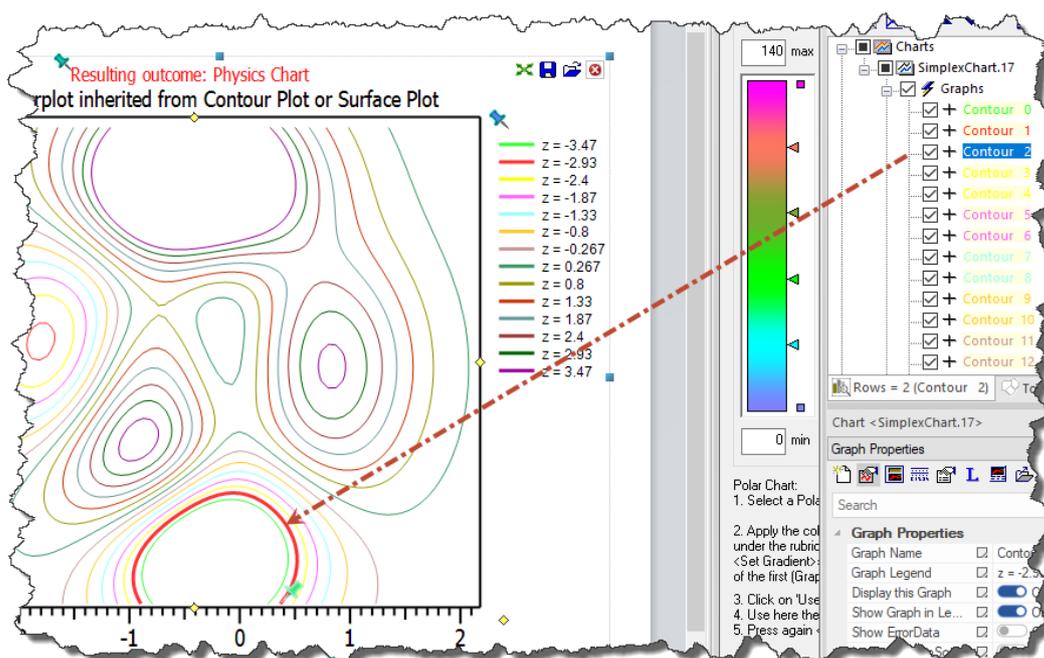
Then you can select/de-select each Graph in the Chart Explorer, as usual:

Here the strategy for doing that:

1. Select from Contour Plots or Surface Plots Thumbnails (TN) a chart (not this one!).
2. Make a Contour Plot Chart, edit Property 'Max. No. of Contour Levels'
3. Select the Contour Plot Chart in the Graphics View
4. When finish, then select TN 'Science Plots' the icon 'Physics Chart' or
5. Ribbonbar 'Chart' Icon 'Exchange Chart', 'Graph Plots', 'Linear Cartesian'
6. You will get this chart here!
7. Check/Uncheck the Graphs in the Chart Explorer

Hint:

If the algorithm makes a small mistake by a curve, then uncheck this Graph in the Chart Explorer!

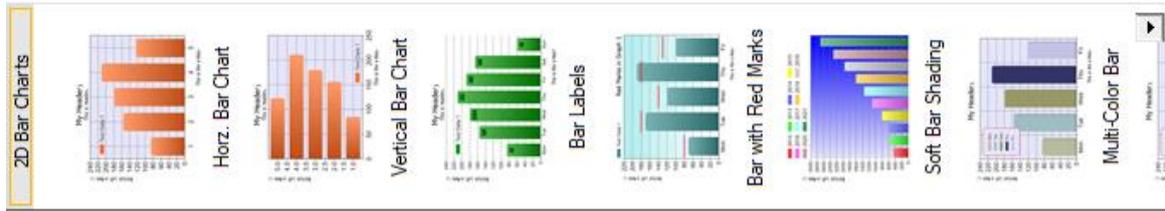


The colors of the Graph curves are taken from the Gradient during build of the Contour Plot!

Release Notes for Upgrade V21

Bar Chart Thumbnails

The bar charts have also been expanded a little bit. Here are some of the new bar Chart thumbnails:



Gradient Coloring

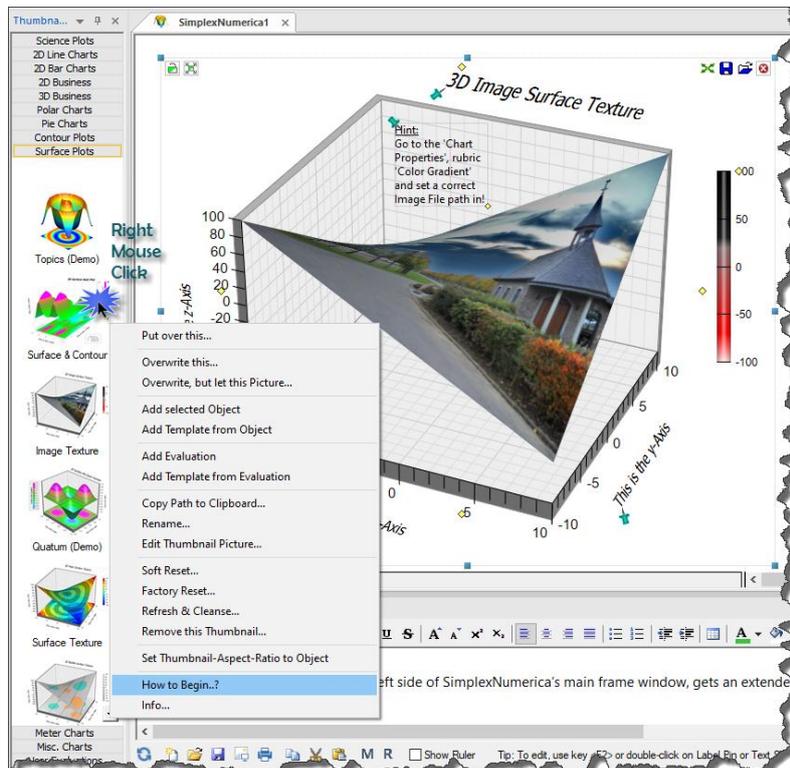
SimplexNumerica V21 supports multi-segment gradient colors in more charts.

Text Rendering Change

SimplexNumerica V21 uses a new text rendering engine with more accurate text positioning for some 2D/3D charts.

Thumbnail Window

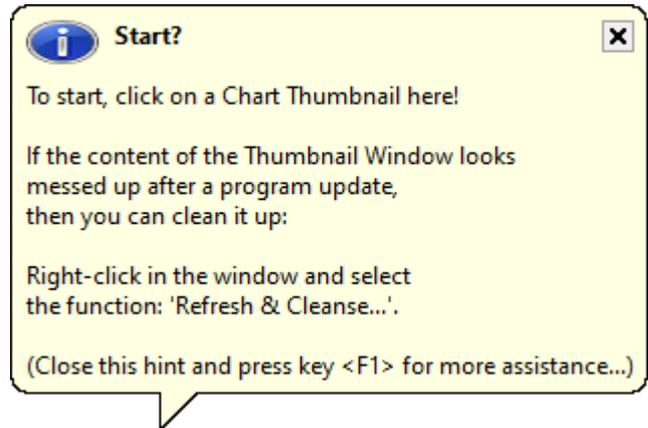
This window, normally placed on the left side of SimplexNumerica's main frame window, got an extended popupmenu with more functionality. Call it by right mouse click on any icon or on the white background of the thumbnail window.



Release Notes for Upgrade V21

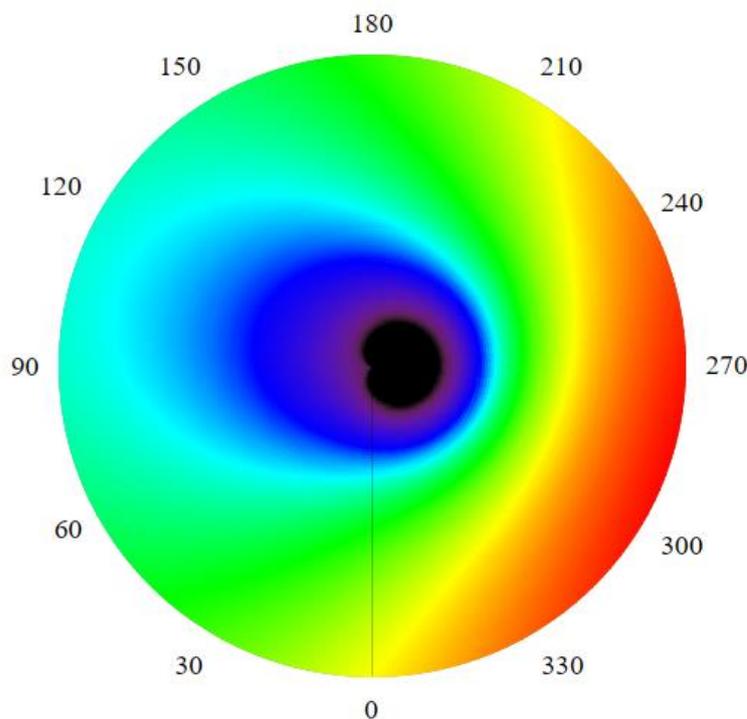
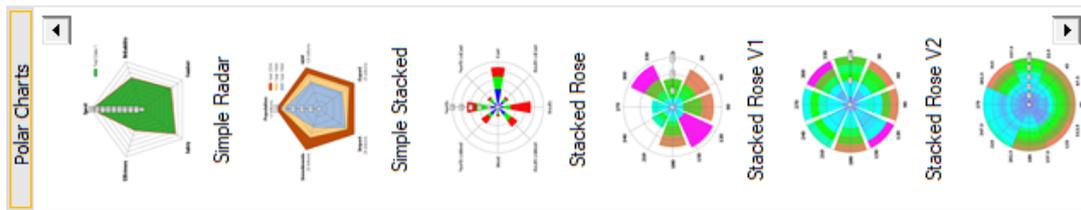
The entry 'How to begin?' reminds you:

If you did not have de-installed the old version, then it can happen that the thumbnail icons are jumbled or twice available or whatever, because the setup program has installed the new version over the previous ones where the thumbnails are differently sorted. To fix this, you can use the 'Refresh & Cleanse' menu on the popupmenu.



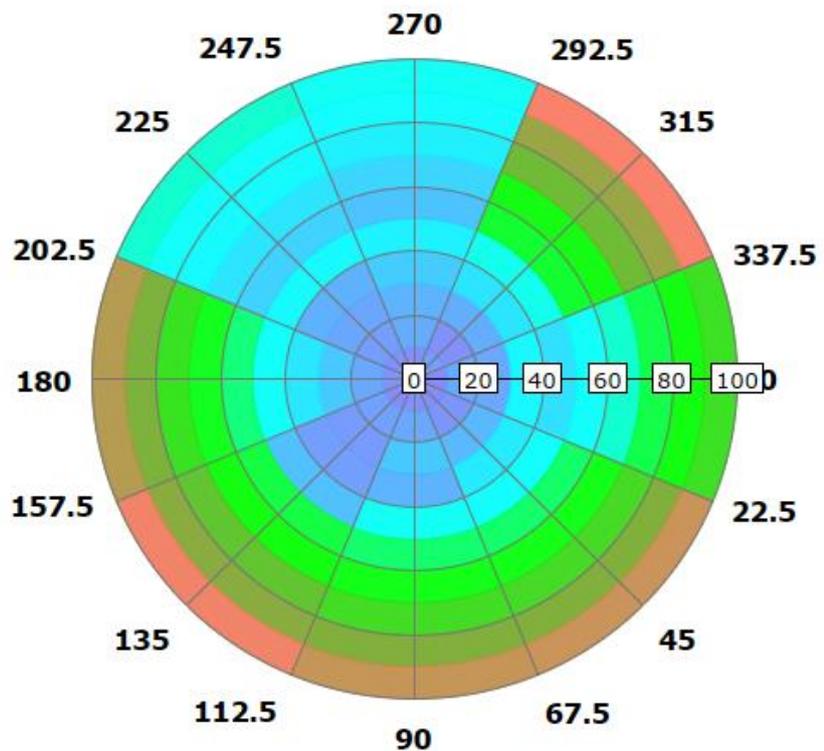
Polar Chart with Color Gradient

The Polar Charts have also been expanded with color gradients.



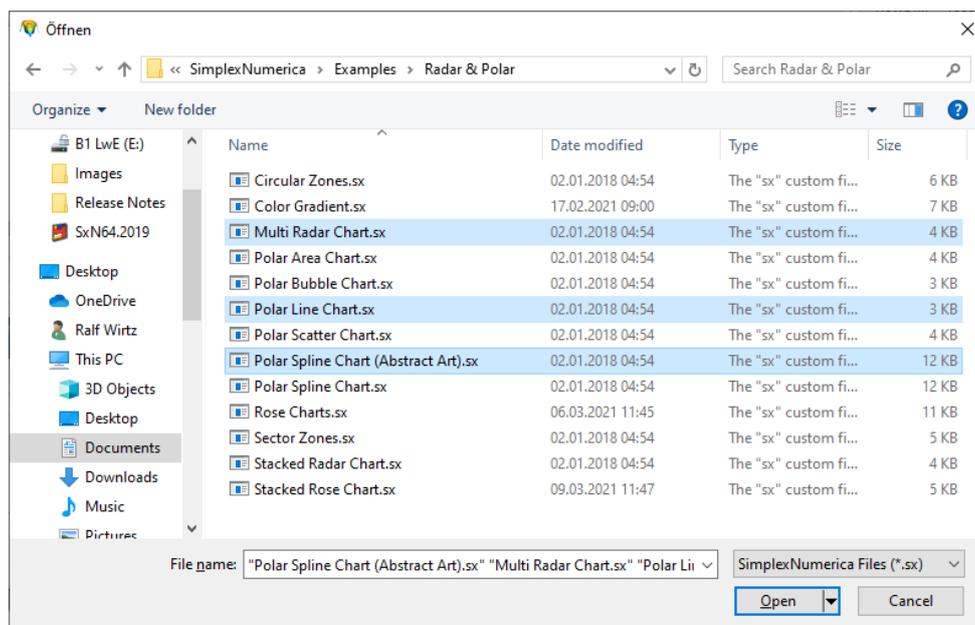
Gradient Polar Charts

Release Notes for Upgrade V21



Open more Evaluations to the same time

Now, you can load several evaluations at the same time. Select/Mark the files in the Explorer as usual and click open...



More...

This is only an excerpt from the many improvements in the new SimplexNumerica V21. Please download it and have a look to the extended separate manuals...