

Regression line

A “Regression line” is a graph that represents a best linear approximation to the relation between two data nodes. To see how well this line describes the “real” relation between the data nodes, you can view the regression line in the same diagram as a scatter plot. If the points are clustered closely around the regression line, the linear approximation is good. You can also compare the regression line to a curve fit. If there is a strong linear relation between the data nodes, then the regression line and the curve fit will be similar. In such cases, you do not gain much by using a more flexible (and thus also more complex) functional relationship as offered by the curve fit.

If the foremost window is a main document window for a simulation data file, the “Regression line” command produces regression lines for all selected pairs of data nodes. To select a pair of data nodes, select the first one whose values should appear along the X-axis in the “First selection” mode, and the second one whose values should appear along the Y-axis in the “Second selection” mode.

If the foremost window is an “XY-plot” window created by using the “Regression line” command, this menu item is disabled. In this case the window title is of the form:

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<node1>(x) <node2>(y).reg
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where <node1> is the name of the node whose values appear along the X-axis and <node2> is the name of the node whose values appear along the Y-axis.

If the foremost window is an “XY-plot” window created by using either the “Scatter plot” command or the “Curve fit” command, this menu item is changed to either “Hide regr. line” or “Show regr. line” depending on the state of the window. If the plot already contains a regression line, you can use the “Hide regr. line” command to hide this regression line. On the other hand, if the plot does not contain a regression line, then you can use the “Show regression line” command to show it.