	Method	Argument Name	Argument Value	Argument info	Method info
g=	gramm('x'	x variable	1D array/cellstr of length N, Matrix of size (N,M) , (N,1) cell of 1D arrays	
g(ind_row,ind_col)=		'у'	y variable	1D array of length N, Matrix of size (N,M), (N,1) cell of 1D arrays	
			color grouping/continuous variable	1D array/cellstr of length N	Constructor for the class.
			lightness grouping variable linestyle grouping variable	1D array/cellstr of length N 1D array/cellstr of length N	Must be called first and result assigned to a variable Use to provide the data to be plotted
		'marker'	marker grouping variable	1D array/cellstr of length N	ose to provide the data to be plotted
		'size'	size grouping variable	1D array/cellstr of length N	
		'group'	subgrouping variable selection variable	1D array/cellstr of length N 1D Logical array of length N	
g.	facet_grid(Bubbee	row grouping variable	1D array/cellstr of length N	
(ind_row,ind_col).			column grouping variable	1D array/cellstr of length N	
,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		'scale'	'fixed' 'free_x'	Same x and y limits on all subplots Same y limits on all subplots, same x limits within columns	
			'free_y'	Same x limits on all subplots, same y limits within rows	
			'free'	Same x limits within columns, same y limits within rows	Use to provide data that will determine separation between subblo
		'space'	'independent' 'fixed'	Independent limits on each plot Same x and y axe size on all subplots	rows and columns. First argument provided will separate along row
		2500	'free_x'	Axis width proportional to x limits (requires 'scale', 'free_x' or 'free')	second will separate along columns
			_		
			'free_y'	Axis height proportional to y limits (requires 'scale', 'free_y' or 'free')	
			'free'	Axis width and height proportional to x and y limits (requires 'scale','free'	
-		'force_ticks'		Do we override defaults and force ticks on all subplots	
	facet_wrap('ncols'	column grouping variable	1D array/cellstr of length N After how many columns do we wrap and create a new row	Use to provide data that will determine separation between subble
		'scale'		Same as argument in gramm facet_grid()	columns, with a wrapping: a new row of subplots is created when ncols is reached
		'force_ticks'		Do we override defaults and force ticks on all subplots	
-	geom_point('dodge'		How much are the points littered in herizontal direction (in L.)	Represent raw data as points (supports color, lightness, marker, si
	<pre>geom_jitter(</pre>	'width'	0.5	How much are the points jittered in horizontal direction (in data units)	Represent raw data as jittered points, useful when lots of overlapping points, e.g. with discrete values (supports color,
		'height'	0.1	How much are the points jittered in vertical direction (in data units)	lightness, marker, size)
		'dodge'	0.5	When using multiple colors, use to dodge graphical elements between colors with the same x value	
					Represent raw data with lines (supports color, lightness, marker,
	<pre>geom_line(</pre>	'dodge'	0.5	When using multiple colors, use to dodge graphical elements between colors with the same x value	size). If x and y are 1D arrays, all points within a group will be connected!
	geom_raster('geom'	'point'	raster elements are points	
	<u> </u>		'line'	raster elements are lines	Represents raw x data as a raster plot
	geom_bar('width'	0.6	Provide to set the width of errorbars	
		'dodge'	0.8	When using multiple colors, use to dodge graphical elements between colors with the same x value	
		'stacked'	true/false	Se to true to have bars placed at the same x stacked	
	<pre>geom_interval(</pre>	'geom'	'area'	Same 'geom' as in stat_summary()	
					Represent intervals provided 'ymin' and 'ymax' data (error bars,
		'width'	0.6	Provide to set the width of bars and errorbars	area)
		'height'	0.7	When using multiple colors, use to dodge graphical elements between colors with the same x value	
	stat_summary('type'	'ci'	mean & basic 95% CI of the mean (1.96 * sem)	
			'bootci'	mean & bootstrapped 95%CI of the mean	
			'sem' 'std'	mean and standard error of the mean mean and standard deviation	
			'quartile'	median and quartiles	
			'95percentile'	median and 95% percentiles	
			'fitnormalci' 'fitpoissonci'	mean and 95% CI of the mean from fitted normal distribution mean and 95% CI of the mean from fitted Poisson distribution	
			'fitbinomialci'	mean and 95% CI of the mean from fitted binomial distribution	Represents summarized Y data per unique values of X. By default, will group all Y values that have the same X value, compute the
		'geom'	'area'	means connected by a line, CI as shaded transparent area	summary variables of interest ('type' argument), and plot it
			'lines'	means connected by a line, CI as thin lines means connected by a line	according to the 'geom' argument.
			'solid_area'	means connected by a line, CI as solid shaded area (use for vector	If X and Y are provided as 1D arrays but X values are not discrete enough, it is possible to compute the Y summaries over X bins with
			'black_errorbar'	exports in pre 2014b versions) CI as black errorbar	the 'bin_in' argument
			'errorbar'	CI as colored errorbar	If X is provided as a matrix or a cell of arrays but every element has non-aligned X values, the argument 'interp_in' can be used to crea
			'bar'	means as colored bars	aligned X values by interpolation over X.
			'point'	means as points Do we set the YLim for the subplot according to the summary or the	
		'setylim'	true/false	data?	
				Provide to interpolate the output (corresponds to the methods	
		'interp'	'linear'	argument of intern1). Use 'nolar' for circular data	
				argument of interp1). Use 'polar' for circular data. Provide to linearly interpolate the input over x (corresponds to	
		'interp' 'interp_in'		Provide to linearly interpolate the input over x (corresponds to number of x points)	
		'interp_in' 'bin_in'	100 10	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins)	
		'interp_in'	100 10	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars	
		'interp_in' 'bin_in'	100 10 0.6	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins)	
	stat_smooth('interp_in' 'bin_in' 'width' 'dodge' 'lambda'	100 10 0.6 0.7	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less)	Represents fast spline smoothed Y data with confidence interval.
	stat_smooth('interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints'	100 10 0.6 0.7 1000 100	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated	Represents fast spline smoothed Y data with confidence interval. This is not proper to use when X/Y are matrices or cells of arrays
	stat_smooth('interp_in' 'bin_in' 'width' 'dodge' 'lambda'	100 10 0.6 0.7 1000 100	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less)	
		'interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom'	100 10 0.6 0.7 1000 100 'normal'	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm()	
		'interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution'	100 10 0.6 0.7 1000 100 'normal'	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm()	
		'interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution'	100 10 0.6 0.7 1000 100 'normal'	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm()	This is not proper to use when X/Y are matrices or cells of arrays
		'interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom'	100 10 0.6 0.7 1000 100 'normal'	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm() Same geom as in gramm stat_summary() Do we display the fit over the whole x axis, or just on the range of the	This is not proper to use when X/Y are matrices or cells of arrays
		'interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit'	100 10 0.6 0.7 1000 100 'normal' true/false	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm() Same display the fit over the whole x axis, or just on the range of the value used for the fit Do we display the fitted equations (with pvals stars) Anonymous function with parameters to fit as first arguments and x	This is not proper to use when X/Y are matrices or cells of arrays
	stat_glm('interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit'	100 10 0.6 0.7 1000 100 'normal' true/false true/false @(param1,param2,x)x.^param1+param2	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm() Same geom as in gramm stat_summary() Do we display the fit over the whole x axis, or just on the range of the value used for the fit Do we display the fitted equations (with pvals stars) Anonymous function with parameters to fit as first arguments and x as last argument	This is not proper to use when X/Y are matrices or cells of arrays
	stat_glm('interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit' 'fun'	100 10 0.6 0.7 1000 100 'normal' true/false true/false	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm() Same display the fit over the whole x axis, or just on the range of the value used for the fit Do we display the fitted equations (with pvals stars) Anonymous function with parameters to fit as first arguments and x	This is not proper to use when X/Y are matrices or cells of arrays
	stat_glm('interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit' 'fun'	100 10 0.6 0.7 1000 100 'normal' true/false true/false @(param1,param2,x)x.^param1+param2 [param1_start param2_start]	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm() Same geom as in gramm stat_summary() Do we display the fit over the whole x axis, or just on the range of the value used for the fit Do we display the fitted equations (with pvals stars) Anonymous function with parameters to fit as first arguments and x as last argument Array with starting values of parameters	This is not proper to use when X/Y are matrices or cells of arrays
	stat_glm('interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit' 'fun' 'StartPoint' 'intopt'	100 10 0.6 0.7 1000 100 'normal' true/false true/false [param1,param2,x)x.^param1+param2 [param1_start param2_start] 'observation' 'functional'	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm() Same display the fit over the whole x axis, or just on the range of the value used for the fit Do we display the fitted equations (with pvals stars) Anonymous function with parameters to fit as first arguments and x as last argument Array with starting values of parameters 95% bounds on a new observation (see option of predint()) 95% bounds for the fitted function Do we display the fit over the whole x axis, or just on the range of the	This is not proper to use when X/Y are matrices or cells of arrays Fits and displays generalized linear models to the data.
	stat_glm('interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit' 'fun' 'StartPoint' 'intopt'	100 10 0.6 0.7 1000 100 'normal' true/false true/false (param1,param2,x)x.^param1+param2 [param1_start param2_start] 'observation' 'functional' true/false	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm() Same geom as in gramm stat_summary() Do we display the fit over the whole x axis, or just on the range of the value used for the fit Do we display the fitted equations (with pvals stars) Anonymous function with parameters to fit as first arguments and x as last argument Array with starting values of parameters 95% bounds on a new observation (see option of predint()) 95% bounds for the fitted function Do we display the fit over the whole x axis, or just on the range of the value used for the fit	This is not proper to use when X/Y are matrices or cells of arrays Fits and displays generalized linear models to the data.
	stat_glm('interp_in' 'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit' 'fun' 'StartPoint' 'intopt'	100 10 0.6 0.7 1000 100 'normal' true/false true/false (param1,param2,x)x.^param1+param2 [param1_start param2_start] 'observation' 'functional' true/false true/false true/false	Provide to linearly interpolate the input over x (corresponds to number of x points) Provide to bin inputs over x values (corresponds to number of bins) Provide to set the width of bars and errorbars When using multiple colors, use to dodge graphical elements between colors with the same x value Smoothing parameter (low values smooth less) Number of points over which the smooth is evaluated Same geom as in gramm stat_summary() Same argument as fitglm() Same display the fit over the whole x axis, or just on the range of the value used for the fit Do we display the fitted equations (with pvals stars) Anonymous function with parameters to fit as first arguments and x as last argument Array with starting values of parameters 95% bounds on a new observation (see option of predint()) 95% bounds for the fitted function Do we display the fit over the whole x axis, or just on the range of the	This is not proper to use when X/Y are matrices or cells of arrays Fits and displays generalized linear models to the data.

Method	Argument Name	Argument Value	Argument info	Method info
		-20 : 0.5 : 20	Edges ovf bins (overrides 'nbins')	
	'geom'		Results as dodged bars	
		'line'	Results connected by a line	
		<pre>'overlaid_bar' 'stacked_bars'</pre>	Results as overlaid bars (use transparency) Results as stacked bars	
		'stairs'	Results as stair line	
		'point'	Results as points	
	'normalization'		Company INI a was light in an a way we are of his too water()	
	'fill'	'face'	Same as 'Normalization' argument of histcounts()	
		'edge'		
		'all'		
	'width'	'transparent'	Provide to specify width of bars	
	'dodge'		Provide to specify dodging between elements	
stat_cornerhist('location'		x (or y) location of the inset axis on the unity line of the parent axis	
	'aspect'	0.3	Aspect ratio (y/x) of the inset axis	Display an histogram of the x-y difference in an inset axis
	'edges'	•••	Same options as stat_bin(). 'specifying edges is recommended, stacked_bar geom unsupported	
stat_density('bandwidth'		Same argument as ksdensity()	
	'function'	'pdf'	Same argument as ksdensity()	
	'kernel'		ourse angument as notices, ()	
		•••	Same argument as ksdensity()	
	'npoints' 'extra_x'		How many points are used to plot the density	
stat_bin2d([n_xbins n_ybins]	Extend the x value range over which the density is evaluated	
('edges'	<pre>{x_edges_array, y_edges_array}</pre>		
	'geom'	'image'		
		'contour'	Fit ellipse that contains 95% of the points (assuming bivariate	
stat_ellipse('type'	'95percentile'	normal)	
		'ci'	Fit ellipse that contains 95% of the bootstrapped xy means	
	'geom'	'area' 'line'	Plot the ellipse as a shaded area with outline	
	patch_opts	110	Just plot the outline of the ellipse	
stat_qq(<pre>makedist('Normal',0,1)</pre>	Provide a theoretical distribution to plot x against using Matlab's	Quantile-quantile plot
			makedist() function. Set to 'y' to plot x against y densities.	
stat_boxplot('width' 'dodge'		Width of boxes Dodging between boxes of different colors within unique x values	Box and whisker plots of y data for each unique x value
	'notch'		Add notches at median ± 1.58 IQR /sqrt(N) to the boxplot	
stat_violin('normalization'		Equal violin areas	
		'count' 'width'	Areas proportional to point count Equal violin widths	
	'half'		Same argument as stat_density()	
	'bandwidth'		Same argument as stat_density()	
	'kernel'		Same argument as stat_density()	
	'npoints' 'extra_y'		Same argument as stat_density() Same argument as stat_density()	
	'fill'		Same argument as stat_bin()	
	'width'			
geom_abline('dodge' 'intercept'		Single value or 1D array of size P	
300 <u>_</u>	'slope'		Single value or 1D array of size P	
	'style'		Single string or 1D cellstr of size P	
<pre>geom_vline(</pre>	'xintercept' 'style'		Single value or 1D array of size P Single string or 1D cellstr of size P	
geom_hline('yintercept'		Single value or 1D array of size P	
	'style'	'k'	Single string or 1D cellstr of size P	
geom_funline(<pre>@(x)exp(sin(x-pi))</pre>	Anonymous function or cell of anonymous functions Single string or 1D cellety of size D	
set_names('style'	'x axis legend'	Single string or 1D cellstr of size P Legend for the x axes	
_		'y axis legend'	Legend for the y axes	
	'row'	'row legend'	Title of the row legends (actual titles will be a combination of title and value)	
		Lealure 1	Title of the column legends (actual titles will be a combination of	
	'column'	'column legend'	title and value)	
	'color'	'color legend'	Title of the color legend (actual legend will use the values)	
	•••		All other titles for the gramm() arguments	
set_title('Title'	Desired title	Call on individual gramm objects to set title. Call on array of gramm objects to set global title
	'FontSize'		Any text property 'Name',value pair	
set_polar(true/false	Do we connect the first and last points? Impose the max of the radial scale (default corresponds to the max of	
	'maxy'	10	y values)	
set_color_options('map'	'lch'	Default HCL-based colormap	
		<pre>'matlab' 'brewer1' 'brewer2' 'brewer3'</pre>	Matlab's own post 2014b map	
		'brewer1' 'brewer2' 'brewer3' 'brewer_pastel' 'brewer_dark'	colorbrewer2.org colormaps	
		[0.1 0 0 0 0 0.2 0.9]	Custom colormap as Nx3 matrix	
	'lightness_range'			
	'chroma_range'			
	'hue_range'			
	'lightness' 'chroma'			
set_order_options('x'		Values sorted in ascending order (numeric or alphabetical)	
		0	Keep order of appearance of values in the input	
		-1	Values ordered according as in the provided array/cell (all unique	
		<pre>[value1 value2 value3] {'value1' 'value2' 'value3'}</pre>	Values ordered according as in the provided array/cell (all unique values have to be present in the array/cell	
		[index1 index2 index3]	Values ordered according as in the provided indices (array of indices in the sorted values array/cell)	
	'color'		and so raided diray/cell/	
set_continuous_color('colormap'		t H endl	
	LCH_colormap'	[L_start L_end; C_start C_end; H_start	t n_enaj	

	Method	Argument Name	Argument Value	Argument info	Method info
	axe_property('axe_property'	axe_property_value	Pass one or multiple name, value pairs for Axes Properties (XLim, XGrid, DataAspectRatio)	
	no_legend(
	set_limit_extra([0.05 0.05]	How much do we extend limits of x axis (ratio wrt original limits)	
			[0.05 0.05]	How much do we extend limits of y axis (ratio wrt original limits)	
	set_datetick('x'	1	Same arguments as datetick(): tickaxis,dateformat	
		'у'	2		
g.	draw(false	Give false as (optional) argument to disable automatic setting of redraw() as resizing callback	Draw the plot! Call on an array of gramm objects to draw all elements on the same figure. The plots are then located according to the row and column indices in the array)
	redraw(0.05	Redraw with custom spacing	
g.	update('color'	new color grouping variable	update() takes the same type of arguments as gramm(). Provide the variables you want to change or add for the following layers. All the other variables will stay as defined by the first call to gramm().	Call update() after a first draw() call in order to change grouping variables for the next layers. Note that after an update() call it is also possible to update facets with facet_grid() or facet_wrap(). for facet updates, the only supported update is going from one facet to multiple ones, or from multiple facets to one: in each case, the layers drawn on the single facet will be copied to the other facets.
			other var		