	Method	Argument Name	Argument Value	Argument info	Method info
g= g(ind_row,ind_col)=	gramm('x'	x variable	1D array/cellstr of length N, Matrix of size (N,M) , (N,1) cell of 1D arrays	
		'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
			marker grouping variable	1D array/cellstr of length N	Use to provide the data to be plotted
			size grouping variable	1D array/cellstr of length N	
			subgrouping variable	1D array/cellstr of length N	
	facet_grid(selection variable row grouping variable	1D Logical array of length N 1D array/cellstr of length N	
g.	racet_griu(column grouping variable	1D array/cellstr of length N	
(ind_row,ind_col).		'scale'	'fixed'	Same x and y limits on all subplots	
			'free_x'	Same y limits on all subplots, same x limits within columns	
			'free_y' 'free'	Same x limits on all subplots, same y limits within rows Same x limits within columns, same y limits within rows	
			'independent'	Independent limits on each plot	Use to provide data that will determine separation between subblots rows and columns. First argument provided will
		'space'	'fixed'	Same x and y axe size on all subplots	separate along rows, second will separate along columns
			'free_x'	Axis width proportional to x limits (requires 'scale', 'free_x' or 'free')	
			'free_y'	Axis height proportional to y limits (requires 'scale', 'free_y' or	
			_	'free') Axis width and height proportional to x and y limits (requires	
			'free'	'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
		'scale'		Same as argument in gramm facet_grid()	subblots columns, with a wrapping: a new row of subplots i created when ncols is reached
		'force_ticks'	true/false	Do we override defaults and force ticks on all subplots	
	<pre>geom_point(</pre>	'dodge'	0.5		Represent raw data as points (supports color, lightness, masize)
	geom_jitter('width'	0.5	How much are the points jittered in horizontal direction (in data	
	geom_jitter(width		units)	Represent raw data as jittered points, useful when lots of overlapping points, e.g. with discrete values (supports colo
		'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, materials)
	geom_line('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 connected!
	geom_raster('point' 'line'	raster elements are points raster elements are lines	Represents raw x data as a raster plot
	geom_bar('width'		Provide to set the width of errorbars	
		'dodge'	Λ 0	When using multiple colors, use to dodge graphical elements	
		_		between colors with the same x value	
			true/false	Se to true to have bars placed at the same x stacked	
	geom_interval('geom'		Same 'geom' as in stat_summary()	
		'width'	0.6	Provide to set the width of bars and errorbars	Represent intervals provided 'ymin' and 'ymax' data (error barea)
				When using multiple colors, use to dodge graphical elements	alea)
		'height'		between colors with the same x value	
	stat_summary('type'		mean & basic 95% CI of the mean (1.96 * sem) mean & bootstrapped 95%CI of the mean	
			'bootci' 'sem'	mean and standard error of the mean	
			'std'	mean and standard deviation	
			'quartile'	median and quartiles	
			'95percentile' 'fitnormalci'	median and 95% percentiles mean and 95% CI of the mean from fitted normal distribution	
			'fitpoissonci'	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
		_	'area'	means connected by a line, CI as shaded transparent area	default, it will group all Y values that have the same X value compute the summary variables of interest ('type' argument
			'lines' 'line'	means connected by a line, CI as thin lines means connected by a line	plot it according to the 'geom' argument.
				means connected by a line, CI as solid shaded area (use for	If X and Y are provided as 1D arrays but X values are not
			'solid_area'	vector exports in pre 2014b versions)	discrete enough, it is possible to compute the Y summaries X bins with the 'bin_in' argument
			'black_errorbar' 'errorbar'	CI as black errorbar CI as colored errorbar	If X is provided as a matrix or a cell of arrays but every ele
			'bar'	means as colored bars	has non-aligned X values, the argument 'interp_in' can be used to create aligned X values by interpolation over X.
			'point'	means as points	
		'setylim'	true/false	Do we set the YLim for the subplot according to the summary or the data?	
		link	'linear'	Provide to interpolate the output (corresponds to the methods	
		'interp'	Tilleat	argument of interp1). Use 'polar' for circular data.	
		'interp_in'	100	Provide to linearly interpolate the input over x (corresponds to number of x points)	
		'interp_in' 'bin in'		number of x points) Provide to bin inputs over x values (corresponds to number of	
		bin_in'	10	number of x points) Provide to bin inputs over x values (corresponds to number of bins)	
		bin_in'	10 0.6	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	
		bin_in' 'width' 'dodge'	10 0.6 0.7	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	
	stat_smooth('bin_in' 'width' 'dodge' 'lambda'	10 0.6 0.7 1000	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 in
	stat_smooth('bin_in' 'width' 'dodge' 'lambda' 'npoints'	10 0.6 0.7 1000 100	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	
	stat_smooth('bin_in' 'width' 'dodge' 'lambda'	10 0.6 0.7 1000 100	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)	
		'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution'	10 0.6 0.7 1000 100 'normal'	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()	
		'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution'	10 0.6 0.7 1000 100 'normal'	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()	
		'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution'	10 0.6 0.7 1000 100 'normal'	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
		'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution'	10 0.6 0.7 1000 100 'normal' true/false	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)	This is not proper to use when X/Y are matrices or cells of
		'bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit'	10 0.6 0.7 1000 100 'normal' true/false	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	This is not proper to use when X/Y are matrices or cells of
	stat_glm('bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit'	10 0.6 0.7 1000 1000 'normal' true/false true/false	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	This is not proper to use when X/Y are matrices or cells of
	stat_glm('bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit' 'fun'	10 0.6 0.7 1000 100 'normal' true/false true/false (param1,param2,x)x.^param1+param2	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
	stat_glm('bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit' 'fun'	10 0.6 0.7 1000 100 'normal' true/false true/false (param1,param2,x)x.^param1+param2 [param1_start_param2_start]	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 a
	stat_glm('bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit' 'fun'	10 0.6 0.7 1000 100 'normal' true/false true/false (param1,param2,x)x.^param1+param2 [param1_start param2_start] 'observation' 'functional'	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	This is not proper to use when X/Y are matrices or cells of a
	stat_glm('bin_in' 'width' 'dodge' 'lambda' 'npoints' 'geom' 'distribution' 'geom' 'fullrange' 'disp_fit' 'fun' 'StartPoint' 'intopt'	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	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())	

	No. allo a al	Awaren and Name	Augusta and Value	Augusta and info	Makhadinta
		Argument Name		Argument info	Method info
	stat_bin('nbins'	-20 : 0.5 : 20	Number of bins Edges ovf bins (overrides 'nbins')	
		'geom'		Results as dodged bars	
		J	'line'	Results connected by a line	
			'overlaid_bar'	Results as overlaid bars (use transparency)	
			'stacked_bars'	Results as stacked bars	
			'stairs' 'point'	Results as stair line Results as points	
		'normalization'		riesulis as politis	
			•••	Same as 'Normalization' argument of histcounts()	
		'fill'	'face'		
			'edge'		
			'all' 'transparent'		
		'width'		Provide to specify width of bars	
		'dodge'	0.7	Provide to specify dodging between elements	
	stat_density('bandwidth'	1. 161	Same argument as ksdensity()	
		'function'	pai	Same argument as ksdensity()	
		'kernel'	'normal'	S , V	
			•••	Same argument as ksdensity()	
		'npoints'		How many points are used to plot the density	
	stat_bin2d('extra_x' 'nbins'		Extend the x value range over which the density is evaluated	
			<pre>{x_edges_array, y_edges_array}</pre>		
		'geom'	'image'		
			'contour'	Fit allines that contains 050/ of the spirits (seems)	
	stat_ellipse('type'	'95percentile'	Fit ellipse that contains 95% of the points (assuming bivariate normal)	
			'ci'	Fit ellipse that contains 95% of the bootstrapped xy means	
		'geom'		Plot the ellipse as a shaded area with outline	
		patch_opts	'line'	Just plot the outline of the ellipse	
			makodiat (Normall 0.1)	Provide a theoretical distribution to plot x against using Matlab's	Quantile quantile slat
	stat_qq(distribution	<pre>makedist('Normal',0,1)</pre>	makedist() function. Set to 'y' to plot x against y densities.	Quantile-quantile plot
	stat_boxplot('width'		Width of boxes	Box and whisker plots of y data for each unique x value
		'dodge' 'notch'		Dodging between boxes of different colors within unique x values Add notches at median ± 1.58 IQR /sqrt(N) to the boxplot	
	stat_violin('normalization'		Equal violin areas	
	_ `		'count'	Areas proportional to point count	
			'width'	Equal violin widths	
		'half' 'bandwidth'	false	Same argument as stat_density() Same argument as stat_density()	
		'kernel'	'normal'	Same argument as stat_density()	
		'npoints'	100	Same argument as stat_density()	
		'extra_y'		Same argument as stat_density()	
		'fill' 'width'		Same argument as stat_bin()	
		'dodge'			
	<pre>geom_abline(</pre>	'intercept'		Single value or 1D array of size P	
		'slope'		Single value or 1D array of size P	
	geom_vline('style' 'xintercept'		Single string or 1D cellstr of size P Single value or 1D array of size P	
	geom_viine('style'		Single string or 1D cellstr of size P	
	geom_hline('yintercept'		Single value or 1D array of size P	
	maam fumlima('style'	'k' @(x)exp(sin(x-pi))	Single string or 1D cellstr of size P Anonymous function or cell of anonymous functions	
	geom_funline('style'		Single string or 1D cellstr of size P	
	set_names('x axis legend'	Legend for the x axes	
		'у'	'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)	
		'column'	'column legend'	Title of the column legends (actual titles will be a combination of	
				title and value)	
		'color'	'color legend'	Title of the color legend (actual legend will use the values)	
	#ct 1115	•••	m:+7-	All other titles for the gramm() arguments	
	set_title(In ct	'Title'	Desired title Any text property 'Name' value pair	Call on individual gramm objects to set title. Call on array of gramm objects to set global title
	cot maland	'FontSize'	true/false	Any text property 'Name', value pair Do we connect the first and last points 2	
	set_polar(Do we connect the first and last points? Impose the max of the radial scale (default corresponds to the	
		'maxy'	10	max of y values)	
se	et_color_options('map'	'lch'	Default HCL-based colormap	
			<pre>'matlab' 'brewer1' 'brewer2' 'brewer3'</pre>	Matlab's own post 2014b map	
			'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'			
Se	et_order_options('chroma'		Values sorted in ascending order (numeric or alphabetical)	
	(0	Keep order of appearance of values in the input	
			-1	Values sorted in descending order	
			<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	
		'color'		indices in the sorted values array/cell)	
set_c	continuous_color('colormap'			
			[L_start L_end; C_start C_end; H_start	Pass one or multiple name, value pairs for Axes Properties	
	axe_property('axe_property'	axe_property_value	(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)	

	Method	Argument Name	Argument Value	Argument info	Method info
			[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	
		'y' :	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.