Package 'limmaGUI'

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Title GUI for limma package

Author James Wettenhall Division of Genetics and Bioinformatics, WEHI.

Maintainer Keith Satterley <keith@wehi.edu.au>

Imports limma, tcltk, BiocInstaller, tkrplot, R2HTML, xtable, gcrma, AnnotationDbi

LazyLoad yes

Description A Graphical User Interface for the limma Microarray package.

License LGPL

URL http://bioinf.wehi.edu.au/limmaGUI/

biocViews Microarray, TwoChannel, DataImport, QualityControl, Preprocessing, DifferentialExpression, MultipleComparison, GUI

NeedsCompilation no

R topics documented:

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`LGchangeLog` *LimmaGUI Change Log*

Description

Write as text the most recent changes from the limmaGUI package changelog.

Usage

```
LGchangeLog(n=20)
```

Arguments

n	integer, number of lines to write of changelog.

Value

No value is produced, but a number of lines of text are written to standard output.

Author(s)

Gordon Smyth

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limmaGUI *Graphical User Interface for the limma microarray package*

Description

Graphical User Interface for the limma microarray package

Usage

```
AboutLimmaGUI()
AboutNormalization()
BChelp()
ChooseContrastsParameterization(parameterizationTreeIndex)
ChooseEbayesStatistic()
ChooseParameterization()
ChoosePlotSymbolByClicking(spotType, cex)
ChooseSpotType(parameterizationTreeIndex)
ComputeContrasts()
CopyGraph(img)
CreateNewParameterization()
DeleteContrastsParameterization()
deleteItemFromList(list1, itemName = NULL, index = NULL)
DeleteParameterization()
DupCorBoxPlot()
ebayesBoxPlots()
evalRcode()
ExportHTMLreport()
ExportTopTable()
fixSeps(string)
GetBackgroundCorrectionMethod()
GetBetweenArrayNormalizationMethod()
GetCoef(parameterizationTreeIndex, whichCoef = "onlyOne")
GetComponentsToExportInHTMLreport(parameterizationIndex = NULL)
GetContrastsParameterizationName()
GetContrastsParameterizationNames(parameterizationTreeIndex)
GetDEcutoff()
```

```
GetDesignOrContrasts(Design = FALSE, Contrasts = FALSE, NumContrasts = 0,
                     parameterizationIndex = 0)
GetGeneLabelsOptions()
GetImageAnalysisColumnHeadings()
GetImageProcessingFileType()
GetJpegOrPngParams(graphFileType)
GetJpegOrPngX11Params(graphFileType)
GetlimmaDataSetName()
GetlmFitMethod()
GetLowessType()
GetNEWxlim(xlim)
GetNormexpOffsetValue(CurrentNormexpOffsetValue)
GetNumParametersNoTargets()
getPackageVersion(pkgName)
GetParameterizationName()
GetParameterNames(parameterizationTreeIndex)
GetParametersAndOrContrasts(parameterizationTreeIndex, whatFor = "heat")
GetPlotLabels(plottitle = "", xlabel = "", ylabel = "")
GetPlotSize()
GetPlotTitle(plottitle = "")
GetPValueCutoff(p.value = 0.01)
GetReducedDuplicateSpacing(parameterizationTreeIndex)
GetRNATypesFrom.ContrastsFromDropDowns.String(string)
GetSlideNum()
GetSpotTypesForLinearModel()
GetSpotTypesIncludedNames(parameterizationTreeIndex)
GetWithinArrayNormalizationMethod()
GetWtAreaParams()
HeatDiagramDialog(parameterName)
HeatDiagramPlot()
HowManyDups()
HTMLplotUsingFunction(Caption = "", File = .HTML.file,
                GraphRelativeDirectory = ".", GraphAbsoluteDirectory =
                NULL, GraphFileName = "", GraphSaveAs = "png",
                GraphBorder = 1, Align = "center", plotFunction =
                NULL, Width = 600, Height = 600, PointSize = 12,
                BG ="white", res = 72, ...)
ImageArrayPlot()
ImageArrayPlotDialog(slidenum)
ImportMA()
ImportMADialog()
initGlobals()
InitNewParameterization()
limmaGUI(BigfontsForlimmaGUIpresentation = FALSE)
limmaHelp()
limmaUsersGuide(view = TRUE)
lmFitMethodHelp()
LogOddsPlot()
```

```
MAPlot()
MAPlotAvg()
MBoxPlot()
MMPlot()
NewLimmaFile()
NormalizeNow()
nstrstr(haystack, needle)
onDestroy()
onExit()
OpenALimmaFile(FileName)
OpenGALandTargetsandSpotTypesfiles()
OpenGALFile()
OpenLimmaFile()
OpenSpotTypesFile()
OpenTargetsFile()
plotMAColorCoded()
PlotOptions()
PrintTipGroupMAPlot()
QQTplot()
read.marrayTools(MFile,AFile, path, verbose, sep, quote, header, ...)
ReadImageProcessingFiles()
Require(pkg)
Resize(img, plotFunction)
SaveAsLimmaFile()
SaveGraphAsJpeg(initialfile, plotFunction)
SaveGraphAsPDF(initialfile, plotFunction)
SaveGraphAsPNG(initialfile, plotFunction)
SaveGraphAsPostscript(initialfile, plotFunction)
SaveLimmaFile()
SelectPlotSymbols(SpotTypes)
SetLayoutParameters()
SetupPlotKeyBindings(tt, img)
SetupPlotMenus(tt, initialfile, plotFunction, img)
SetWD()
showChangeLog()
showCitations()
showGAL()
showTopTable(..., export = FALSE)
SimplifyContrastsExpression(string)
strstr(haystack, needle)
tclArrayVar()
TclRequire(tclPkg)
TryReadImgProcFile(expr)
UpdateSpotTypesStatus()
UpDownOrBoth()
VennDiagramPlot()
ViewDesignOrContrastsMatrixAsPairs(DesignOrContrasts, designOrContrastsList,
                 parameterizationIndex, contrastsParameterizationIndex
```

```
                = NULL)
ViewDesignOrContrastsMatrixInTable(DesignOrContrasts, designOrContrastsList,
                parameterizationIndex, contrastsParameterizationIndex
                = NULL)
ViewExistingContrastsParameterization()
ViewExistingParameterization()
ViewRNATargets()
ViewSpotTypes()
```

Arguments

BigfontsForlimmaGUIpresentation	If set to TRUE, larger fonts are used. However, some font sizes are not controlled by limmaGUI and so must be adjusted in the operating system, e.g. in the Control Panel in Windows under Display, Appearance.
...	HTMLplotUsingFunction:arg15, showTopTable:arg1
AFile	Flat-file of log-intensities output by marrayTools
Align	HTMLplotUsingFunction:arg8
BG	HTMLplotUsingFunction:arg13
Caption	HTMLplotUsingFunction:arg1
cex	ChoosePlotSymbolByClicking:arg2
contrastsParameterizationIndex	ViewDesignOrContrastsMatrixInTable:arg4, ViewDesignOrContrastsMatrixAsPairs:arg4
Contrasts	GetDesignOrContrasts:arg2
CurrentNormexpOffsetValue	GetNormexpOffsetValue:arg1
designOrContrastsList	ViewDesignOrContrastsMatrixInTable:arg2, ViewDesignOrContrastsMatrixAsPairs:arg2
DesignOrContrasts	ViewDesignOrContrastsMatrixInTable:arg1, ViewDesignOrContrastsMatrixAsPairs:arg1
Design	GetDesignOrContrasts:arg1
export	showTopTable:arg2
expr	TryReadImgProcFile:arg1
FileName	A file name.
File	HTMLplotUsingFunction:arg2
GraphAbsoluteDirectory	HTMLplotUsingFunction:arg4
GraphBorder	HTMLplotUsingFunction:arg7
GraphFileName	HTMLplotUsingFunction:arg5
graphFileType	GetJpegOrPngParams:arg1, GetJpegOrPngX11Params:arg1

GraphRelativeDirectory
: HTMLplotUsingFunction:arg3

GraphSaveAs
: HTMLplotUsingFunction:arg6

haystack
: nstrstr:arg1, strstr:arg1

header
: See help for read.table

Height
: HTMLplotUsingFunction:arg11

img
: SetupPlotMenus:arg1, Resize:arg1, CopyGraph:arg1, SetupPlotKeyBindings:arg2

index
: deleteItemFromList:arg1

initialfile
: SaveGraphAsJpeg:arg1, SaveGraphAsPDF:arg1, SaveGraphAsPNG:arg1, SaveGraphAsPostscript:arg1, SetupPlotMenus:arg2

itemName
: deleteItemFromList:arg1

list1
: deleteItemFromList:arg1

MFile
: Flat-file of log-ratios output by marrayTools

needle
: nstrstr:arg2, strstr:arg2

NumContrasts
: GetDesignOrContrasts:arg3

p.value
: A p-value cutoff.

parameterizationIndex
: GetDesignOrContrasts:arg4, GetComponentsToExportInHTMLreport:arg1, GetDesignOrContrasts:arg4, ViewDesignOrContrastsMatrixInTable:arg3, ViewDesignOrContrastsMatrixAsPairs:arg3

parameterizationTreeIndex
: GetParametersAndOrContrasts:arg1, ChooseContrastsParameterization:arg1, ChooseSpotType:arg1,GetCoef:arg1, GetParameterNames:arg1, GetReducedDuplicateSpacing:arg1, GetContrastsParameterizationNames:arg1, GetSpotTypesIncludedNames:arg1

parameterName
: HeatDiagramDialog:arg1

path
: Path to the directory containing the MFile and AFile

pkgName
: getPackageVersion:arg1

pkg
: Require:arg1

plotFunction
: SetupPlotMenus:arg1, HTMLplotUsingFunction:arg9, Resize:arg1, SaveGraphAsJpeg:arg2, SaveGraphAsPDF:arg2, SaveGraphAsPNG:arg2, SaveGraphAsPostscript:arg2

plottitle
: GetPlotLabels:arg1,GetPlotTitle:arg1

PointSize
: HTMLplotUsingFunction:arg12

quote
: See help for read.table

res
: HTMLplotUsingFunction:arg14

sep
: Column separator. ("\t" for tab-delimited text)

slidenum
: ImageArrayPlotDialog:arg1

spotType
: ChoosePlotSymbolByClicking:arg1

SpotTypes
: SelectPlotSymbols:arg1

string
: fixSeps:arg1,SimplifyContrastsExpression:arg1, GetRNATypesFrom.ContrastsFromDropDowns.String:a

tclPkg	TclRequire:arg1
tt	SetupPlotKeyBindings:arg1, SetupPlotMenus:arg1
verbose	Optional diagnostic messages
view	limmaUsersGuide:arg1
whatFor	GetParametersAndOrContrasts:arg2
whichCoef	GetCoef:arg2
Width	HTMLplotUsingFunction:arg10
xlabel	GetPlotLabels:arg2
xlim	GetNEWxlim:arg1
ylabel	GetPlotLabels:arg3

Details

This function launches a Graphical User Interface for the limma package by Gordon Smyth. The GUI uses Tk widgets (via the R TclTk interface by Peter Dalgaard) in order to provide a simple interface to the limma functions for linear modelling of microarrays and identification of differentially expressed genes.

Author(s)

James Wettenhall

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