

# Package ‘limmaGUI’

April 10, 2015

**Version** 1.42.0

**Date** 09 April 2010

**Title** GUI for limma package

**Author** James Wettenhall Division of Genetics and Bioinformatics, WEHI

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

**Depends** limma, tcltk

**Suggests** statmod, R2HTML, xtable, tkrplot

**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

## R topics documented:

LGchangeLog . . . . .	1
limmaGUI . . . . .	2
<b>Index</b>	<b>8</b>

---

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

---

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

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

**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

# Index

## \*Topic **IO**

limmaGUI, 2

## \*Topic **documentation**

LGchangeLog, 1

AboutLimmaGUI (limmaGUI), 2

AboutNormalization (limmaGUI), 2

BChelp (limmaGUI), 2

ChooseContrastsParameterization  
(limmaGUI), 2

chooseDir (limmaGUI), 2

ChooseEbayesStatistic (limmaGUI), 2

ChooseParameterization (limmaGUI), 2

ChoosePlotSymbolByClicking (limmaGUI), 2

ChooseSpotType (limmaGUI), 2

ComputeContrasts (limmaGUI), 2

ComputeLinearModelFit (limmaGUI), 2

CopyGraph (limmaGUI), 2

CreateNewParameterization (limmaGUI), 2

CreateTreeAndList (limmaGUI), 2

DeleteContrastsParameterization  
(limmaGUI), 2

deleteItemFromList (limmaGUI), 2

DeleteParameterization (limmaGUI), 2

DupCorBoxPlot (limmaGUI), 2

ebayesBoxPlots (limmaGUI), 2

evalRcode (limmaGUI), 2

ExportAvalues (limmaGUI), 2

ExportHTMLreport (limmaGUI), 2

ExportMvalues (limmaGUI), 2

ExportTopTable (limmaGUI), 2

fixSeps (limmaGUI), 2

GetBackgroundCorrectionMethod  
(limmaGUI), 2

GetBetweenArrayNormalizationMethod  
(limmaGUI), 2

GetCoef (limmaGUI), 2

GetComponentsToExportInHTMLreport  
(limmaGUI), 2

GetContrastsParameterizationName  
(limmaGUI), 2

GetContrastsParameterizationNames  
(limmaGUI), 2

GetDEcutoff (limmaGUI), 2

GetDesignOrContrasts (limmaGUI), 2

GetGeneLabelsOptions (limmaGUI), 2

GetGenePixFlagWeightings (limmaGUI), 2

GetImageAnalysisColumnHeadings  
(limmaGUI), 2

GetImageProcessingFileType (limmaGUI), 2

GetJpegOrPngParams (limmaGUI), 2

GetJpegOrPngX11Params (limmaGUI), 2

GetlimmaDataSetName (limmaGUI), 2

GetlmFitMethod (limmaGUI), 2

GetLowessType (limmaGUI), 2

GetNEWxlim (limmaGUI), 2

GetNormexpOffsetValue (limmaGUI), 2

GetNumParametersNoTargets (limmaGUI), 2

getPackageVersion (limmaGUI), 2

GetParameterizationName (limmaGUI), 2

GetParameterNames (limmaGUI), 2

GetParametersAndOrContrasts (limmaGUI),  
2

GetPlotLabels (limmaGUI), 2

GetPlotSize (limmaGUI), 2

GetPlotTitle (limmaGUI), 2

GetPValueCutoff (limmaGUI), 2

GetReducedDuplicateSpacing (limmaGUI), 2

GetRNATypesFrom.ContrastsFromDropDowns.String  
(limmaGUI), 2

GetSlideNum (limmaGUI), 2

GetSpotTypesForLinearModel (limmaGUI), 2

GetSpotTypesIncludedNames (limmaGUI), 2



GetWithinArrayNormalizationMethod (limmaGUI), 2  
 GetWtAreaParams (limmaGUI), 2  
 HeatDiagramDialog (limmaGUI), 2  
 HeatDiagramPlot (limmaGUI), 2  
 HowManyDups (limmaGUI), 2  
 HTMLplotUsingFunction (limmaGUI), 2  
 ImageArrayPlot (limmaGUI), 2  
 ImageArrayPlotDialog (limmaGUI), 2  
 imageplotlimmaGUI (limmaGUI), 2  
 ImportMA (limmaGUI), 2  
 ImportMADialog (limmaGUI), 2  
 initGlobals (limmaGUI), 2  
 InitNewParameterization (limmaGUI), 2  
 LGchangeLog, 1  
 limmaGUI, 2  
 limmaGUIhelp (limmaGUI), 2  
 limmaHelp (limmaGUI), 2  
 limmaUsersGuide (limmaGUI), 2  
 lmFitMethodHelp (limmaGUI), 2  
 LogOddsPlot (limmaGUI), 2  
 MAPlot (limmaGUI), 2  
 MAPlotAvg (limmaGUI), 2  
 MBoxPlot (limmaGUI), 2  
 MMPlot (limmaGUI), 2  
 NewLimmaFile (limmaGUI), 2  
 NormalizeNow (limmaGUI), 2  
 nstrstr (limmaGUI), 2  
 onDestroy (limmaGUI), 2  
 onExit (limmaGUI), 2  
 OpenALimmaFile (limmaGUI), 2  
 OpenGALandTargetsandSpotTypesfiles (limmaGUI), 2  
 OpenGALFile (limmaGUI), 2  
 OpenLimmaFile (limmaGUI), 2  
 OpenSpotTypesFile (limmaGUI), 2  
 OpenTargetsFile (limmaGUI), 2  
 plotMAColorCoded (limmaGUI), 2  
 PlotOptions (limmaGUI), 2  
 PrintTipGroupMAPlot (limmaGUI), 2  
 QQTplot (limmaGUI), 2  
 read.marrayTools (limmaGUI), 2  
 readGALLimmaGUI (limmaGUI), 2  
 ReadImageProcessingFiles (limmaGUI), 2  
 Require (limmaGUI), 2  
 Resize (limmaGUI), 2  
 SaveAsLimmaFile (limmaGUI), 2  
 SaveGraphAsJpeg (limmaGUI), 2  
 SaveGraphAsPDF (limmaGUI), 2  
 SaveGraphAsPNG (limmaGUI), 2  
 SaveGraphAsPostscript (limmaGUI), 2  
 SaveLimmaFile (limmaGUI), 2  
 SelectPlotSymbols (limmaGUI), 2  
 SetLayoutParameters (limmaGUI), 2  
 SetupPlotKeyBindings (limmaGUI), 2  
 SetupPlotMenus (limmaGUI), 2  
 SetWD (limmaGUI), 2  
 showChangeLog (limmaGUI), 2  
 showCitations (limmaGUI), 2  
 showGAL (limmaGUI), 2  
 showTopTable (limmaGUI), 2  
 SimplifyContrastsExpression (limmaGUI), 2  
 strstr (limmaGUI), 2  
 tclArrayVar (limmaGUI), 2  
 TclRequire (limmaGUI), 2  
 Try (limmaGUI), 2  
 TryReadImgProcFile (limmaGUI), 2  
 UpdateSpotTypesStatus (limmaGUI), 2  
 UpDownOrBoth (limmaGUI), 2  
 vennDiagramlimmaGUI (limmaGUI), 2  
 VennDiagramPlot (limmaGUI), 2  
 ViewDesignOrContrastsMatrixAsPairs (limmaGUI), 2  
 ViewDesignOrContrastsMatrixInTable (limmaGUI), 2  
 ViewExistingContrastsParameterization (limmaGUI), 2  
 ViewExistingParameterization (limmaGUI), 2  
 ViewRNATargets (limmaGUI), 2  
 ViewSpotTypes (limmaGUI), 2  
 WithinBetweenOrBoth (limmaGUI), 2  
 wtfFlags2 (limmaGUI), 2