

Package ‘tsgui’

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Title Gui for Simulating Time Series

Author Martin Schlather [aut, cre],

Maintainer Martin Schlather <schlather@math.uni-mannheim.de>

Depends R (>= 3.0), RandomFieldsUtils

Imports stats,graphics, methods, grDevices, utils, tcltk2, tcltk,
tkrplot

Suggests

Description This gui shows realisations of times series, currently ARMA and GARCH processes. It might be helpful for teaching and studying.

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URL <http://ms.math.uni-mannheim.de/de/publications/software>

NeedsCompilation yes

Repository CRAN

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ARMA.model

Definition of an ARMA model.

Description

ARMA.model defines an ARMA model as input for the argument user of [tsgui](#)

Usage

```
ARMA.model(p.max=3, q.max=3)
```

Arguments

`p.max, q.max` non-negative integer. Any ARMA(p,q) model can be modelled in the gui with $p \leq p.max$ and $q \leq q.max$. Note that $p.max + q.max$ should not be larger than 6. Otherwise gui cannot manage the abundance of parameters.

Value

A list of parameters is returned.

Author(s)

Martin Schlather, <schlather@math.uni-mannheim.de>

See Also

[tsgui](#), [GARCH.model](#)

Examples

```
if (interactive())
  tsgui(user=list(AR=ARMA.model(p.max=5, q.max=0)),
        included.models = "ARMA")
```

GARCH.model*Definition of an GARCH model.*

Description

GARCH.model defines an GARCH model as input for the argument user of [tsgui](#)

Usage

```
GARCH.model(a.max=3, b.max=3)
```

Arguments

`a.max, b.max` non-negative integer. Any GARCH(p,q) model can be modelled in the gui with $p \leq a.max$ and $q \leq b.max$. Note that $a.max + b.max$ should not be larger than 6. Otherwise gui cannot manage the abundance of parameters.

Value

A list of parameters is returned.

Author(s)

Martin Schlather, <schlather@math.uni-mannheim.de>

See Also

[tsgui](#), [ARMA.model](#)

Examples

```
if (interactive())
  tsgui(user=list(ARCH=GARCH.model(a.max=5, b.max=0)),
        included.models = "GARCH")
```

tsgui

Gui for times series

Description

This GUI allows real-time simulations of ARMA and GARCH processes. Further models can be added by the user.

Usage

```
tsgui(user = NULL, wait = 1000, included.models =c("ARMA", "GARCH"))
```

Arguments

`user` a further class of model (or a list of such models), additional to ARCH(3,3) and GARCH(3,3)

`wait` non-negative integer. Users will usually not change this value. if the value is greater than 0, the control over the command line of R is returned to the user only after the tcltk window has been left. `tsgui` checks every `wait / 1000` seconds whether the tcltk window has been left.

`included.models` NULL or string vector giving the internally defined models that shall be available.

Value

A list with the latest chosen parameters is returned.

Author(s)

Martin Schlather, <schlather@math.uni-mannheim.de>

See Also

[ARMA.model](#), [GARCH.model](#)

Examples

```
if (interactive()) tsgui()
```

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