Package 'ITGM'

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Type Package

Title Individual Tree Growth Modeling

Version 0.41

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Description Individual tree model is an instrument to support the decision with
regard to forest management. This package provides functions that let you work
with data for this model. Also other support functions and extension related to
this model are available.

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LazyData TRUE

Depends Fgmutils (>= 0.8), R (>= 3.0)

Imports gsubfn, data.table, sqldf, plyr

RoxygenNote 6.1.1

Suggests testthat

NeedsCompilation no

Repository CRAN

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R topics documented:

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firstsMeasurements   *First Measurements per Group*

Description

this function generates a field "primeiraMedicao" that contains the lowest age for each item in the group both derived from dtFrame

Usage

```
firstsMeasurements(dtFrame, group = "parcela", age = "idadearred")
```

Arguments

dtFrame	It is the database that contains the data
group	is the field that represents the groups default parcela
age	default idadearred is the name of field containing the values of the group

Value

data.frame dtFrame with the field "primeiraMedicao"

Examples

```
dtf = data.frame(
grupo = c(1,2,3,4,1,2,3,4),
medicoes= c(10,20,30,40,5,30,1,52))
firstsMeasurements(dtf, group = "grupo", age = "medicoes")
```

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getModelosLiteraturaExclusivos
                              get Models Literature Exclusives

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Description

This function creates and returns an array with the usual models mapped to the mapping vector

Usage

```
getModelosLiteraturaExclusivos(mapeamento = c("idade1", "idade2", "bai1",
  "s"))
```

Arguments

mapeamento	list of names fields of database will work "idade1", "idade2", "bai1", "s"

Value

will be returned list of function with exclusive model

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getModelosLiteraturaGenericos
get Generic Model Literature

Description

This function creates and returns an array with the usual models of literature

Usage

```
getModelosLiteraturaGenericos()
```

Value

will be returned list of models generic

---

getModelsExclusiveOfLiterature
get Models Literature Exclusives

Description

This function creates and returns an array with the usual models mapped to the mapping vector

Usage

```
getModelsExclusiveOfLiterature(mapper = c("idade1", "idade2", "bai1",
  "s"))
```

Arguments

mapper   list of names fields of database will work "idade1", "idade2", "bai1", "s"

Value

will be returned list of function with exclusive model

---

getModelsGenericOfLiterature

get Generic Model Literature

Description

This function creates and returns an array with the usual models of literature

Usage

```
getModelsGenericOfLiterature()
```

Value

will be returned list of models generic

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maiTOmdd   *Individual Tree Model to Diameter Distribution Model*

Description

this function add fields to returned base "inventario" in order to make it usable for diameter distribution models

Usage

```
maiTOmdd(projeto, talhao, parcela, fila, cova, fuste, idade, dap, volume,
  espacamento, amplitude = 1, verbose = FALSE)
```

Arguments

projeto	is the field that contains the cod project of individuals
talhao	is the field that contains the cod of project subdivision
parcela	is the field that contains the cod of talhao subdivision
fila	is the field that contains the cod row where the tree is
cova	is the field that contains the cod pit where the tree is
fuste	is the field that contains the cod shaft of tree
idade	is the field that contains the age of individuals the observation
dap	is the field that contains the diameter of individuals the observation
volume	is the field that contains the volume of individuals the observation
espacamento	is the field that contains the distance in METROS between one and another individual for ex.:c("3 x 3", "3,3 x 3", ...
amplitude	default 1 is the amplitude of diameter classes
verbose	use TRUE to status presentation

Value

data.table what is "inventario" with some added fields

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project   *Project Volume based in Ages*

Description

this function provides a list of volume projections in a future age or from one to another future age

Usage

```
project(firstAge = NaN, lastAge, fitDAP, fitHT, base,
  mapper = list(age1 = "idade1", age2 = "idade2", dap1 = "dap1", dap2 =
  "dap2", ht1 = "ht1", ht2 = "ht2"), calcVolume = calculaVolumeDefault,
  withoutBaseFields = F)
```

Arguments

firstAge	early age. if only one age use NaN
lastAge	late age for project or the age at which one wants to get the volume
fitDAP	an adjustment of the return type of a function lm() from dap
fitHT	an adjustment of the return type of a function lm() from ht
base	a dataset to project
mapper	the mapping for the name of the old fields age, dap and ht in base
calcVolume	function to calc volume based base, dap e ht, default calculaVolumeDefault of Fgmutils
withoutBaseFields	
	want returned projected volume no contains the fields of the base? default no

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