Package 'noiseR'

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Type Package

Title R package for noise modeling

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Description More about what it does (maybe more than one line)
Use four spaces when indenting paragraphs within the Description.

URL https://github.com/cassiorachid/noiseR

BugReports https://github.com/cassiorachid/noiseR/issues

License GPL (>=2)

Imports raster, rgeos, sp, tuneR

Suggests parallel

Encoding UTF-8

LazyData true

RoxygenNote 6.1.1

R topics documented:

propag.ruido *Sound decay models for points on GIS*

Usage

```
propag.ruido(points=NA, ID=NULL, NIS0=NA, Alfa=NA, Beta=NA, elev.r=NA,
       contour.veg=NA, save.meta=T, name.meta=NULL, multicore=F,
       cl=detectCores()-1)
```

Arguments

points	Matrix with longitude (first column) and latitude (second column) of each point to be modeled.
ID	Matrix with IDs for each point the user wants to model. Do not use repeated names.
NIS0	Sound intensity level at 1m. Parameter of the sound decay model. See details for explanations of the equation.
Alfa	Matrix with values of *alfa* constant of the decay equation (see details for more information). Need to be one row for each point, even if they are the same.
Beta	Same as the *alfa* parameter, but representing values of *beta* constant.
elev.r	Raster with elevation values. OBS.: This raster will be used to extract all relevant GIS information (*i. e.* reslution, size, crs).
contour.veg	Object type 'SpatialPolygonDataFrame' with the contour of the open areas (areas without vegetagion cover). Still in improvement, need to work with multiple open areas.
save.meta	Logical. If TRUE all steps of the process of modeling will be saved in your work directory. Objects will be saved with 'Results.propag_' at the beggining of the file name. (By default = TRUE)
name.meta	Optional. Define a custom name to be added after de default name if save.meta is TRUE.
multicore	Logical. If TRUE multicore processing will be active. This parameter improve the processing time. (by deafult = TRUE)
cl	Numerical. Cluster object. Number of processes to be used in the propag.ruido computation. Only considered if multicore is TRUE. See documentation of package parallel and snow for details. (By default = number of CPU cores of the current host less one)

Details

Include here the equations used and their explanation.

Author(s)

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Carlos Barros de Araújo <cabarau@gmail.com>

See Also

propag.ruido.linha

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propag.ruido.linha *Sound decay models for lines on GIS*

Usage

```
propag.ruido.linha(line.origin=NA, line.end=NA, ID=NULL, NIS0=NA, Alfa=NA,
     Beta=NA, elev.r=NA, contour.veg=NA, save.meta=T, name.meta=NULL, multicore=F,
       cl=detectCores()-1)
```

Arguments

line.origin	Matrix with longitude (first column) and latitude (second column) of the beggining of each line to be modeled (only straight lines are acepted).
line.end	Matrix with longitude (first column) and latitude (second column) of the end of each line to be modeled (only straight lines are acepted)
ID	Matrix with IDs for each line the user wants to model. Do not use repeated names.
NIS0	Sound intensity level at 1m. Parameter of the sound decay model. See details for explanations of the equation.
Alfa	Matrix with values of *alfa* constant of the decay equation (see details for more information). Need to be one row for each point, even if they are the same.
Beta	Same as the *alfa* parameter, but representing values of *beta* constant.
elev.r	Raster with elevation values. OBS.: This raster will be used to extract all relevant GIS information (*i. e.* reslution, size, crs).
contour.veg	Object type 'SpatialPolygonDataFrame' with the contour of the open areas (areas without vegetagion cover). Still in improvement, need to work with multiple open areas.
save.meta	Logical. If TRUE all steps of the process of modeling will be saved in your work directory. Objects will be saved with 'Results.propag_' at the beggining of the file name. (By default = TRUE)
name.meta	Optional. Define a custom name to be added after de default name if save.meta is TRUE.
multicore	Logical. If TRUE multicore processing will be active. This parameter improve the processing time. (by deafult = TRUE)
cl	Numerical. Cluster object. Number of processes to be used in the propag.ruido computation. Only considered if multicore is TRUE. See documentation of package parallel and snow for details. (By default = number of CPU cores of the current host less one)

Details

Include here the equations used and their explanation.

Note

Function modified from `propag.ruido`.

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See Also

`propag.ruido`

`rel.func.apply` *Internal noiseR function*

Description

Internal `noiseR` function.

Function to improve the time computation of `propag.ruido`. It's only to be used inside an `apply` family function.

Usage

```
rel.func.apply(x, pi.x, li.x = NULL, r, elev.rel, S.pi.x)
```

Note

These function is not to be called by the user.

Author(s)

Cássio Rachid Simões <cassiorachid@gmail.com>

sum.rasterdB *Sum raster with dB values*

Description

Function to sum rasters with decibel values (Intensity Level).

Last upate: 2018.06.01

Usage

```
sum.rasterdB(x, na.rm=FALSE)
```

Arguments

x	A list of raster objects with values in decibels (Intensity Level) to sum.
na.rm	Logical. NA action, if TRUE, ignore NA values during the sum.

Details

Include details.

Value

One raster with the sum of all other raster of the input.

Author(s)

Cássio Rachid Simões <cassiorachid@gmail.com>

References

Include citations.

veg.func.apply *Internal noiseR function*

Description

Internal noiseR function.

Function to improve the time computation of propag.ruido. It's only to be used inside an apply family function.

Usage

```
veg.func.apply(x, pi.x, li.x = NULL, contour.veg)
```

Note

These function is not to be called by the user.

Author(s)

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Index