Package 'combinationpvalues'

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Type Package

Title Combination of Independent P-Values

Version 0.1.4

URL https://github.com/StatsGirl/Master2021/tree/main/R

BugReports https://github.com/StatsGirl/Master2021/issues

Description
Provides access to six fundamental statistics that can be used for the purpose of combination p-values. All methods used can referenced here: Heard & Rubin-Delanchy (2017) <doi:10.48550/arXiv.1707.06897>.

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Depends R (>= 3.5.0)

Imports chi, utils, dplyr, spatstat.utils, stats

Encoding UTF-8

RoxygenNote 7.1.1

Suggests testthat (>= 3.0.0)

Config/testthat/edition 3

NeedsCompilation no

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Repository CRAN

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`CombinedPValueMethod` *CombinedPValueMethod*

Description

#' Input is the test statistic of the previous method selected and it returns the combined p-value

Usage

```
CombinedPValueMethod(x, name)
```

Arguments

`x`	#' test statistic of method used (i.e., Tippett, Stouffer, etc.)
`name`	# name of method using

Value

Combined P-value

Examples

```
Output <- SumOfPs(0.1,0.3,.7)
Final <- TippettMethod(Output)
Combined <- CombinedPValueMethod(Final,"Tippett")
```

`EdMethod` *Edgington Method*

Description

#' Combination p-value method that uses Edgington statistic Summation i=1 to n pi where p equals p-value

Usage

```
EdMethod(x)
```

Arguments

`x`	#' SumOfPs

Value

Combined P-value

Examples

```
Output <- SumOfPs(0.1,0.3,.7)
Final <- EdMethod(Output)
```

`FishersMethod` *FishersMethod*

Description

#' Combination p-value method that uses Fishers statistic Summation i=1 to n log of pi where p equals p-value

Usage

```
FishersMethod(x)
```

Arguments

x	#' SumOfPs

Value

Combined P-value

Examples

```
Output <- SumOfPs(0.1,0.3,.7)
Final <- FishersMethod(Output)
```

`GeorgeMethod` *PearsonsMethod*

Description

#' Combination p-value method that uses George statistic Summation i=1 to n log(pi/(1-pi)) where p equals p-value

Usage

```
GeorgeMethod(x)
```

Arguments

x	#' SumOfPs

Value

Combined P-value

Examples

```
Output <- SumOfPs(0.1,0.3,.7)
Final <- GeorgeMethod(Output)
```

PearsonsMethod *PearsonsMethod*

Description

#' Combination p-value method that uses Pearson statistic -Summation i= 1 to n log(1-pi) where p equals p value

Usage

```
PearsonsMethod(x)
```

Arguments

x	#' InfinitePs

Value

Combined P-value

Examples

```
Output <- SumOfPs(0.1,0.3,.7)
Final <- PearsonsMethod(Output)
```

StoufferMethod *StoufferMethod*

Description

#' Combination p-value method that uses Stouffer statistic Summation i=1 to n inverse CDF of N(0,1)(pi) where p equals p-value

Usage

```
StoufferMethod(x)
```

Arguments

x	#' SumOfPs

Value

Combined P-value

Examples

```
Output <- SumOfPs(0.1,0.3,.7)
Final <- StoufferMethod(Output)
```

SumOfPs *SumOfPs*

Description

Converts a list of p-values into a list, n= 2,3,...,k

Usage

```
SumOfPs(x, ...)
```

Arguments

x	#' Input n p-values n = 2,3,...,k
...	#list of p values

Value

List of p-values

Examples

```
Output <- SumOfPs(0.1,0.3,.7)
```

TippettMethod *TippettMethod*

Description

#' Combination p-value method that uses Tippett statistic min(p1,...,pn), n= 2,3,...,k where p equals p-value

Usage

```
TippettMethod(x)
```

Arguments

x	#' SumOfPs

Value

Combined P-value

Examples

```
Output <- SumOfPs(0.1,0.3,.7)
Final <- TippettMethod(Output)
```

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