

Package ‘aggregation’

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Type Package

Title p-Value Aggregation Methods

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Author Lynn Yi, Lior Pachter

Maintainer Lynn Yi <lynn yi@caltech.edu>

Description Contains functionality for performing the following methods of p-value aggregation: Fisher's method [Fisher, RA (1932, ISBN: 9780028447308)], the Lancaster method (weighted Fisher's method) [Lancaster, HO (1961, <doi:10.1111/j.1467-842X.1961.tb00058.x>)], and Sidak correction [Sidak, Z (1967, <doi:10.1080/01621459.1967.10482935>)]. Please cite Yi et al., the manuscript corresponding to this package [Yi, L et al., (2017), <doi:10.1101/190199>].

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fisher	<i>Fisher's Method</i>
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Description

Aggregate p-values with equal weights. Equivalent to the Lancaster method with all p-values weighted at 2.

Usage

```
fisher(pvalues)
```

Arguments

pvalues	A vector of p-values (i.e. between 0 and 1) to be aggregated with Fisher's method. NAs will be filtered out.
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Examples

```
fisher(c(.1, .2, .3))
```

lancaster	<i>Lancaster method</i>
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Description

Weighted p-value aggregation.

Usage

```
lancaster(pvalues, weights)
```

Arguments

pvalues	A vector of p-values (i.e. between 0 and 1). NAs will be filtered out.
weights	A vector of weights, each associated with its respective p-value. Weights must be nonnegative. NAs and negative weights will be filtered out with corresponding p-values.

Examples

```
lancaster(c(.1, .5), c(2, 4))
```

sidak	<i>Perform the Sidak method.</i>
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Description

The Sidak method uses the minimum p-value but corrects it for the number of p-values that are aggregated.

Usage

```
sidak(pvalues)
```

Arguments

pvalues A vector of p-values to be aggregated. NAs will be filtered.

Examples

```
sidak(c(.1, .2, .3))
```

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