

Package ‘rbscCI’

October 14, 2022

Type Package

Title Blyth-Still-Casella Confidence Interval

Version 0.1.0

Date 2020-07-05

Description Provides a fast calculation of the Blyth-Still-Casella confidence interval. The implementation follows the 'StatXact' 9 manual (Cytel 2010) and "Refining Binomial Confidence Intervals" by George Casella (1986) <[doi:10.2307/3314658](https://doi.org/10.2307/3314658)>.

License GPL (>= 3)

Imports Rcpp

LinkingTo Rcpp, BH

RoxygenNote 6.0.1

Suggests testthat

NeedsCompilation yes

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Repository CRAN

Date/Publication 2020-07-08 13:00:02 UTC

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bscCI	<i>Blyth-Still-Casella confidence interval</i>
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Description

Blyth-Still-Casella confidence interval

Usage

```
bscCI(n_tot, n_suc, conf, digits = 2)
```

Arguments

n_tot	Total number of experiments
n_suc	Number of successes
conf	Confidence level (1-alpha)
digits	Number of decimal places to be used

Details

Computes the exact Blyth-Still-Casella binomial confidence interval. The initial CI is the Clopper-Pearson confidence interval.

Value

A vector containing the confidence interval. If `digits` is given, both upper and lower limits are rounded to the given number of digits.

Examples

```
bscCI(100,25,0.95,digits = 3)
```

cpCI	<i>Clopper-Pearson confidence interval</i>
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Description

Clopper-Pearson confidence interval

Usage

```
cpCI(n_tot, n_suc, conf, digits = 2)
```

Arguments

n_tot	Total number of experiments
n_suc	Number of successes
conf	Confidence level (1-alpha)
digits	Number of decimal places to be used

Details

Computes the Clopper-Pearson confidence interval.

Examples

```
cpCI(100, 25, 0.95)
```

rbscCI	<i>Blyth-Still-Casella Confidence Interval</i>
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Description

Blyth-Still-Casella Confidence Interval

Details

Provides a fast calculation of the Blyth-Still-Casella confidence interval.

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