

# Package ‘rbscCI’

July 8, 2020

**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>.

**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)
```

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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)
```

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rbscCI

*Blyth-Still-Casella Confidence Interval*

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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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