Package: NPBBBDAefficiency (via r-universe)

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Type Package

Title A-Efficiency for Nested Partially Balanced Bipartite Block (NPBBB) Designs

Version 0.1.0

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Description Nested Partially Balanced Bipartite Block (NPBBB) designs involve two levels of blocking: (i) The block design (ignoring sub-block classification) serves as a partially balanced bipartite block (PBBB) design, and (ii) The sub-block design (ignoring block classification) also serves as a PBBB design. More details on constructions of the PBBB designs and their characterization properties are available in Vinayaka et al.(2023) <doi:10.1080/03610926.2023.2251623>. This package calculates A-efficiency values for both block and sub-block structures, along with all parameters of a given NPBBB design.

License GPL-3

Encoding UTF-8

RoxygenNote 7.3.2

NeedsCompilation no

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Repository https://vinayaka11442.r-universe.dev

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NPBBBD_Aeff *A-Efficiency for Nested Partially Balanced Bipartite Block (NPBBB) Designs*

Description

This function calculates the A-efficiency values for the block and sub-block structures of a given NPBBB design

Usage

```
NPBBBD_Aeff(bd, sbd, v1, v2)
```

Arguments

bd	Block design (ignoring sub-blocks) in matrix form considering rows as blocks
sbd	Sub-block design (ignoring blocks) in matrix form considering rows as blocks
v1	Number of test treatments
v2	Number of control treatments

Value

The output includes:

- v1: Number of test treatments
- v2: Number of controls
- b1: Number of blocks
- b2: Number of sub-blocks
- r1: Test replications
- r2: Control replications
- k1: Block size
- k2: Sub-block size
- Lambdas1: Lambda values from block design
- Lambdas2: Lambda values from sub-block design
- E1: Block design efficiency
- E2: Sub-block design efficiency

References

Vinayaka, Parsad R, Mandal BN, Dash S, LN Vinaykumar, Kumar M, Singh DR (2023) <doi:10.1080/03610926.2023.225162

Examples

```
## Not run:
library(NPBBBDAefficiency)
NPBBBD_Aeff(matrix(c(1, 2, 3, 4), nrow = 2, byrow = TRUE),
            matrix(c(1, 2, 3, 4), nrow = 2, byrow = TRUE),
            v1 = 2, v2 = 2)
## End(Not run)
```

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