Package 'sFFLHD'

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Type Package

Title Sequential Full Factorial-Based Latin Hypercube Design

Version 0.1.1

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Description Gives design points from a sequential full factorial-based Latin hypercube design, as described in Duan, Ankenman, Sanchez, and Sanchez (2015, Technometrics, <doi:10.1080/00401706.2015.1108233>).

License GPL-3

LazyData TRUE

RoxygenNote 5.0.1

Imports methods, stats, conf.design

Depends DoE.base

NeedsCompilation no

Repository CRAN

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R topics documented:

`sFFLHD-class` *sFFLHD object that gives a batch of points at a time.*

Description

sFFLHD object that gives a batch of points at a time.

Value

A sFFLHD object

Fields

`D` numeric. The number of dimensions for the design. Must be set.

`L` numeric. The number of points in each batch, also the number of levels of each dimension. Must be set.

`maximin` logical. Should maximin distance be used to space out points?

`a` numeric. A root of L that determines the intermediate stages. Is automatically set to smallest possible value, which is recommended.

`b` integer. The batch number.

`nb` integer. The number of points selected so far.

`lb` numeric. Current levels of the small grid.

`Lb` numeric. Current levels of the intermediate grid.

`Xb` matrix. Current design matrix, continuous from 0 to 1.

`Vb` matrix. Small grid design.

`Mb` matrix. Intermediate grid design.

`Wb` matrix. Big grid design.

`A1` matrix. The first OA slice.

`r` integer. Used to keep track of loop index.

`p` integer. Used to keep track of loop index.

`Ar` matrix. Current Ar.

`stage` integer. Current stage.

`vii` integer. Used to keep track of location in stage 2.

`Fslices` list. A list of slices.

`FF1.1` matrix. Temporary matrix used to generate slices.

`Mb.store` matrix. Temporary storage of Mb.

`v.shuffle` integer. A storage value for storing order. Requires extra optimization.

Examples

```
s <- sFFLHD$new(D=2,L=3)
s$get.batch()
s <- sFFLHD$new(D=2,L=4)
s$get.batch()
```

split_matrix *Split a matrix by rows, based on either the number of rows per group or number of splits.*

Description

Split a matrix by rows, based on either the number of rows per group or number of splits.

Usage

```
split_matrix(mat, rowspergroup = NULL, nsplits = NULL, shuffle = TRUE)
```

Arguments

mat	A matrix to be split.
rowspergroup	Number of rows in a group.
nsplits	Number of splits to make.
shuffle	Should the splits be shuffled before returning?

Value

A list of the splits of the matrix.

Examples

```
mat <- matrix(1:12, ncol=2)
split_matrix(mat, 4, shuffle=FALSE)
split_matrix(mat, 4, shuffle=TRUE)
split_matrix(mat, nsplits=4, shuffle=FALSE)
```

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