Package ‘LowWAFOMNX’

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Type Package
Title Low WAFOM Niederreiter-Xing Sequence
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Description Implementation of Low Walsh Figure of Merit (WAFOM) sequence
       based on Niederreiter-Xing sequence <DOI:10.1007/978-3-642-56046-0_30>.
URL https://mersennetwister-lab.github.io/LowWAFOMNX/
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Imports Rcpp (>= 0.12.9), RSQLite (>= 2.0)
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VignetteBuilder knitr
RoxygenNote 6.0.1
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Low WAFOM Niederreiter-Xing Sequence

Description

Description: R implementation of Low Walsh Figure of Merit Sequence based on Niederreiter-Xing Sequence.

Details

Porting to R by Mutsuo Saito. The R version does not return coordinate value zero, but returns value very near to zero, $2^{-64}$.

Acknowledgment

The development of this code is partially supported by JST CREST.

Reference


Examples

```r
srange <- lowWAFOMNX.dimMinMax()
mrange <- lowWAFOMNX.dimF2MinMax(srange[1])
points <- lowWAFOMNX.points(dimR=srange[1], dimF2=mrange[1])
points <- lowWAFOMNX.points(dimR=srange[1], dimF2=mrange[1], digitalShift=TRUE)
```
**lowWAFOMNX.dimF2MinMax**

get minimum and maximum F2 dimension number.

**Description**

get minimum and maximum F2 dimension number.

**Usage**

lowWAFOMNX.dimF2MinMax(dimR)

**Arguments**

dimR  dimension.

**Value**

supported minimum and maximum F2 dimension number

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**lowWAFOMNX.dimMinMax**

get minimum and maximum dimension number of Low WAFOM Niederreiter-Xing Sequence

**Description**

get minimum and maximum dimension number of Low WAFOM Niederreiter-Xing Sequence

**Usage**

lowWAFOMNX.dimMinMax()

**Value**

supported minimum and maximum dimension number.
`lowWAFOMNX.points`  

*Description*

This R version does not return coordinate value zero, but returns value very near to zero, $2^{-64}$.

*Usage*

```r
lowWAFOMNX.points(dimR, dimF2 = 10, digitalShift = FALSE)
```

*Arguments*

- `dimR` dimension.
- `dimF2` F2-dimension of each element.
- `digitalShift` use digital shift or not.

*Value*

matrix of points where every row contains `dimR` dimensional point.
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