Package ‘LowWAFOMSobol’

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Type Package
Title Low WAFOM Sobol Sequence
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Description Implementation of Low Walsh Figure of Merit (WAFOM) sequence
      based on Sobol sequence.
URL https://mersennetwister-lab.github.io/LowWAFOMSobol/
License BSD_3_clause + file LICENSE
Imports Rcpp (>= 0.12.9), RSQLite (>= 2.0)
LinkingTo Rcpp
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VignetteBuilder knitr
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NeedsCompilation yes
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R topics documented:

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Description

Description: R implementation of Low Walsh Figure of Merit (WAFOM) Sequence based on Sobol 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 <- LowWAFOMSobol.dimMinMax()
mrange <- LowWAFOMSobol.dimF2MinMax(srange[1])
points <- LowWAFOMSobol.points(dimR=srange[1], dimF2=mrange[1])
points <- LowWAFOMSobol.points(dimR=srange[1], dimF2=mrange[1], digitalShift=TRUE)
```
Description

get minimum and maximum F2 dimension number.

Usage

lowWAFOMSobol.dimF2MinMax(dimR)

Arguments

dimR dimension.

Value

supported minimum and maximum F2 dimension number

Description

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

Usage

lowWAFOMSobol.dimMinMax()

Value

supported minimum and maximum dimension number.
lowWAFOMSobol.points

get points from Low WAFOM SobolSequence

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

Usage
lowWAFOMSobol.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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