Package ‘LowWAFOMSobol’

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Type Package

Title Low WAFO M Sobol Sequence

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Description Implementation of Low Walsh Figure of Merit (WAFO M) sequence
              based on Sobol sequence.

URL https://mersennetwister-lab.github.io/LowWAFOMSobol/

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Imports Rcpp (>= 0.12.9), RSQLite (>= 2.0)

LinkingTo Rcpp

Suggests knitr, rmarkdown, testthat

VignetteBuilder knitr

RoxygenNote 6.0.1

NeedsCompilation yes

Repository CRAN

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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)
```
lowWAFOMSobol.dimF2MinMax

get minimum and maximum F2 dimension number.

Description

get minimum and maximum F2 dimension number.

Usage

lowWAFOMSobol.dimF2MinMax(dimR)

Arguments

dimR dimension.

Value

supported minimum and maximum F2 dimension number

lowWAFOMSobol.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

lowWAFOMSobol.dimMinMax()

Value

supported minimum and maximum dimension number.
lowWAFOMSobol.points

get points from Low WAFOM SobolSequence

Description

This R version does not returns 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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