

# Worksheet 3

Practical Lab Numerical Computing

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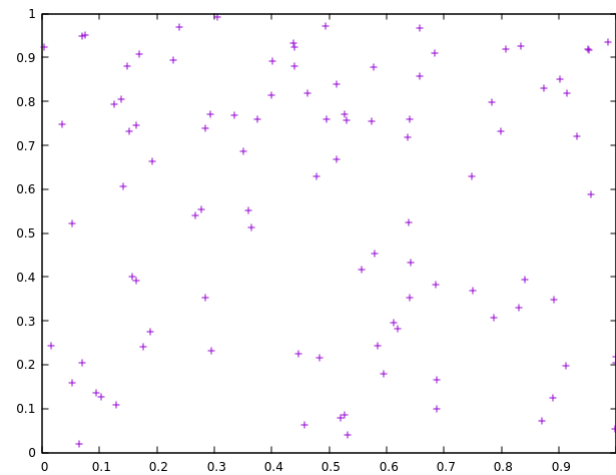
Lars Schleithoff

Hendrik Kleikamp

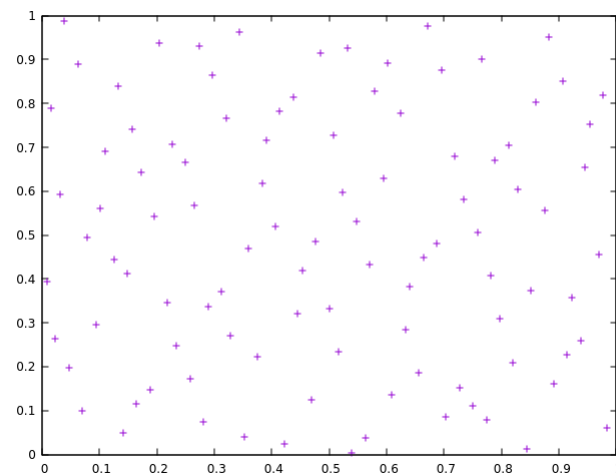
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## Task 7

Uniform random numbers in  $(0, 1)^2$ :



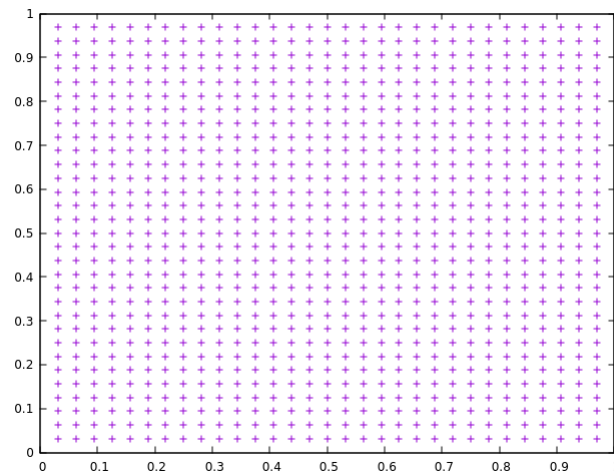
Halton sequence:



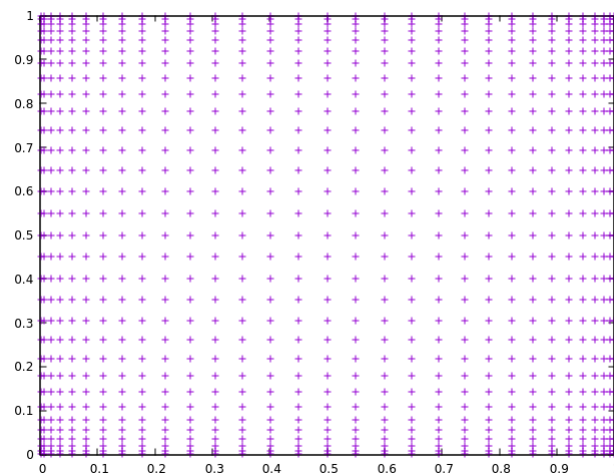
One can see that there are some regions in  $(0,1)^2$  where no uniform random numbers are set. This is not the case in the point set calculated by the Halton sequence. The Halton sequence gives a very uniform spread set without any holes.

## Task 9

Quadrature nodes of the two-dimensional product rule for trapezoidal rule:



Quadrature nodes of the two-dimensional product rule for Gauss-Legendre:



Quadrature nodes of the two-dimensional product rule for Clenshaw Curtis:

