Portrait of Pi

digital print on canvas, 2011

The image is an attempt to graphically present the number π (*pi*) without resorting to symbolic notation. The aim is to find a visual form that would not only be a conventional representation of this famous irrational number, but also convey its mathematical sense.

The number *pi* can be calculated from the formula for the area of a circle $S=\pi r^2$ by a simple transformation:

$$\pi=\frac{S}{r^2}$$

S denotes the area of a circle and its graphical equivalent is simply a circle. The denominator r^2 refers to the area of a square whose side is equal to the radius of the circle r.

The entire right-hand side of the equation above, and hence the number *pi* itself, can now be presented graphically as the ratio of a circle and a square with the appropriate dimensions:

Abstract symbols have been almost completely eliminated from this representation. The only element remaining from algebraic notation is the horizontal line symbolizing division. The work *Portrait of Pi* is an attempt to represent – in a purely visual manner – the idea of dividing a circle by a square in the form of two interpenetrating figures.