Cantor's Paradise

installation, metal, 2024

The line segment, the square, and the cube define areas consisting of the same – infinite number of points.

One of the cornerstones of modern mathematics is set theory, whose main founder was the German scholar Georg Cantor. Among other things, he proved an astonishing property of the set of real numbers, namely that there are "as many" elements within any arbitrarily set interval as in the whole set. Consequently, he rigorously proved what had already been intuited: that even the shortest segment, like the whole line, consists of an uncountable set of points with the cardinality of the *continuum*. He also demonstrated that any segment consists of the "same" number of points as the square and cube constructed on that segment. As a result, even the shortest line segment contains "as many" points as there are in a multidimensional space of any number of dimensions.

These discoveries caused such a significant revolution in mathematics that David Hilbert stated, "No one shall expel us from the paradise which Cantor has created for us."