

## Peano- and Hilbert curve

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In this presentation, we give a historical survey on Hilbert's interpretation of the space-filling Peano-curve which Hilbert presented at the GDNÄ session in Bremen in 1890. Since Hilbert was systematically working in the field of number theory in that period, we try to explain the reason for his sudden interest and immediate reaction to Peano's surprising result from the same year which proved the possibility of a continuous surjective mapping of a line to a square. We argue that by means of his address, Hilbert was willingly trying to express his positive view on Cantor's set theory, an affinity which was also present by selecting the continuum hypothesis as the first problem on his list of the mathematical problems for the 20<sup>th</sup> century and which lead his thinking also long afterwards in the 1920s while working on his so-called Hilbert's program in logic. We present also Hilbert's correspondence with H. Minkowski on this topic.

Minkowski, H., *Briefe an David Hilbert*. Editors L. Rüdénberg, H. Zassenhaus. Berlin, Springer 1973.

Weyl, H., David Hilbert and His Mathematical Work. *Bulletin of the AMS* (50), 1944, pp. 612–654.