

## bio.1 Georg Cantor

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An early biography of Georg Cantor (GAY-org KAHN-tor) claimed that he was born and found on a ship that was sailing for Saint Petersburg, Russia, and that his parents were unknown. This, however, is not true; although he was born in Saint Petersburg in 1845.

Cantor received his doctorate in mathematics at the University of Berlin in 1867. He is known for his work in set theory, and is credited with founding set theory as a distinctive research discipline. He was the first to prove that there are infinite sets of different sizes. His theories, and especially his theory of infinities, caused much debate among mathematicians at the time, and his work was controversial.

Cantor's religious beliefs and his mathematical work were inextricably tied; he even claimed that the theory of transfinite numbers had been communicated to him directly by God. In later life, Cantor suffered from mental illness. Beginning in 1884, and more frequently towards his later years, Cantor was hospitalized. The heavy criticism of his work, including a falling out with the mathematician Leopold Kronecker, led to depression and a lack of interest in mathematics. During depressive episodes, Cantor would turn to philosophy and literature, and even published a theory that Francis Bacon was the author of Shakespeare's plays.

Cantor died on January 6, 1918, in a sanatorium in Halle.



Figure 1: Georg Cantor

**Further Reading** For full biographies of Cantor, see [Dauben \(1990\)](#) and [Grattan-Guinness \(1971\)](#). Cantor's radical views are also described in the BBC Radio 4 program *A Brief History of Mathematics* ([du Sautoy, 2014](#)). If you'd like to hear about Cantor's theories in rap form, see [Rose \(2012\)](#).

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Georg Cantor, p. 1: Portrait of Georg Cantor by Otto Zeth courtesy of the Universitätsarchiv, Martin-Luther Universität Halle–Wittenberg. UAHW Rep. 40-

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## Bibliography

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du Sautoy, Marcus. 2014. A brief history of mathematics: Georg Cantor. URL <http://www.bbc.co.uk/programmes/b00ss1j0>. Audio Recording.

Grattan-Guinness, Ivor. 1971. Towards a biography of Georg Cantor. *Annals of Science* 27(4): 345–391.

Rose, Daniel. 2012. A song about Georg Cantor. URL <https://www.youtube.com/watch?v=QUP5Z4Fb5k4>. Audio Recording.