

## This Day in History... December 28, 1903

### Birth of John von Neumann

Mathematician and scientist John von Neumann was born on December 28, 1903, in Budapest, Hungary.

Von Neumann was considered a child prodigy. At only six years old, he could divide two eight-digit numbers in his head and joke with his father in classical Greek. He also learned English, French, German, and Italian and took a particular interest in history.



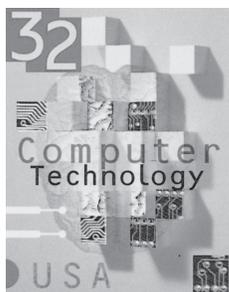
*This stamp is from the 2005 American Scientists Issue.*

Von Neumann was a brilliant student, impressing his professors from an early age. By the time he was 19, he published two significant mathematical papers and provided the modern definition for ordinal numbers. Von Neumann was particularly fond of mathematics, but his father wanted him to pursue a more lucrative career, so he encouraged him to study chemical engineering. Von Neumann then earned his PhD in mathematics at the same time as he earned his chemical engineering degree.

Von Neumann began teaching at the University of Berlin in 1928. He was the youngest *Privatdozent* (a type of teacher) in the university's history. Von Neumann began producing mathematic papers quickly – about one per month. Then in October 1929, he was offered a teaching position at Princeton University and left for the US.

Von Neumann taught at Princeton until 1933 before being offered a lifetime professorship at the Institute for Advanced Study (IAS) in New Jersey. As a professor, he was notorious for dashing out equations and erasing them before students could copy them. He had a fun-loving nature and enjoyed Yiddish and odd jokes. He preferred to work in a noisy, chaotic environment. Von Neumann often played German marches very loud on his phonograph, which bothered Albert Einstein and others in nearby offices. Also, he loved to read so much, he often did it while driving, which led him to get a number of tickets. In 1937, he became a naturalized citizen of the United States.

Von Neumann's early interests were logic and theory, like the mathematical Game Theory later used to devise military strategy. He was also a major contributor to quantum mechanics and helped create the atomic bomb for the Manhattan Project in Los Alamos, New Mexico.



*Von Neumann is considered a key figure in the development of modern computers.*

After World War II, von Neumann worked to develop large scale, high-speed electronic computers with stored programs. His design of the IAS computer – the von Neumann Architecture – became the model for most of its successors. Von Neumann spent his later years as a consultant or member of a number of projects and groups, including the Armed Forces Special Weapons Project (AFSWP), the CIA, the General Advisory Committee of the Atomic Energy Commission, the Lawrence Livermore National Laboratory, and the Scientific Advisory Group of the United States Air Force.

In 1955, he was made commissioner of the Atomic Energy Commission. The following year, President Eisenhower awarded him the Presidential Medal of Freedom for his service in furthering the security of the United States. Von Neumann died on February 8, 1957, two years after being diagnosed with cancer. Several awards bear his name, as well as a crater on the Moon and a university in Hungary.

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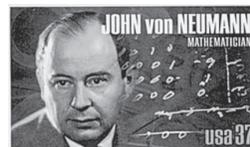
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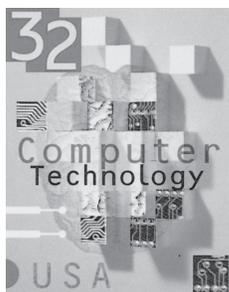
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