

Hall of Fame: Konrad Zuse

Jochen Kressin · 2023-07-19



Konrad Zuse was a German engineer and inventor who is widely regarded as the father of the computer. He was a true visionary who saw the potential of technology long before anyone else, and his contributions to the field of computing are immeasurable. In this article, we'll take a look at the life and times of Konrad Zuse and explore why he's the father of the computer and the mad scientist of the machine age.

Konrad was born on June 22, 1910, in Berlin, Germany. He grew up in a world that was just starting to embrace technology, and he was fascinated by it from a young age. As a child, he was always tinkering with gadgets and machines, and he soon discovered that he had a talent for making things work.

In the 1930s, Konrad was working as an engineer when he became interested in the field of computing. He realized that the existing mechanical calculators of the time were slow and inefficient, and he set out to create a machine that could perform calculations faster and more accurately. He designed and built the first programmable computer, the Z1, in his parent's living room in 1936.

The Z1 was the first computer to use binary arithmetic and the first to use floating-point arithmetic.

The Z1 was a revolutionary machine that was far ahead of its time. It was the first computer to use binary arithmetic and the first to use [floating-point arithmetic](#). It was also the first computer to use [conditional](#)

branching and the first to use a program stored in memory. The Z1 was a true masterpiece of engineering, and it paved the way for the development of the modern computer.

In 1941, Konrad built the Z3, which was the first fully functional programmable computer in the world. The Z3 was a true marvel of technology, and it was a major step forward in the field of computing. It was also the first computer to use binary logic and the first to use a microprogrammed control unit. The Z3 was a true work of art, and it set the standard for the computers of the future.

Zuse continued to innovate and improve upon his design, and he eventually built the Z4, which was the first computer to be used for commercial purposes. The Z4 was widely regarded as the best computer of its time.

Zuse's contributions to the field of computing are immeasurable, and he is widely regarded as the father of the computer. He was a true visionary who saw the potential of technology long before anyone else, and his legacy lives on to this day.

In conclusion, Konrad Zuse was a true pioneer in the field of computing. He was a visionary, a mad scientist, and a true genius. He's the father of the computer, and his legacy will live on for generations to come. So the next time you're sitting in front of your computer, take a moment to think about Konrad Zuse and the amazing contributions he made to the world of technology.

A reconstruction of the legendary Z1 can be seen nowadays found in the [Berlin Technical Museum](#).

Memory

The memory of Z1 consists of 3 8-fold blocks. Each block consists of 8 lines with 8 bits. In total 192 Byte of memory is available on the machine.

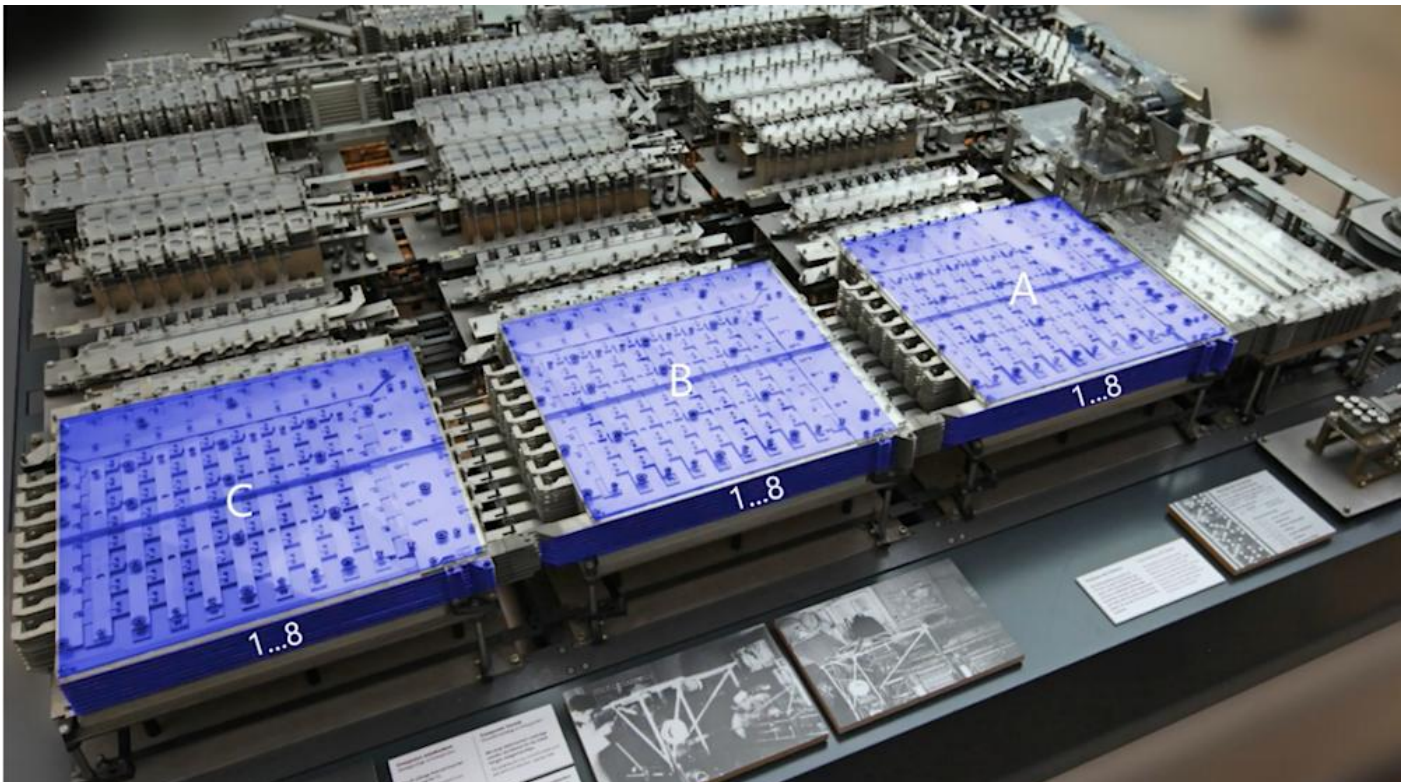


Image source: <https://www.youtube.com/watch?v=HDxs3-aJSAI>

Floating Point Number

On the image below you can see a bit for the sign marked in green (from the left), 8 exponent bits marked in red and 23 bits of mantissa marked in red.

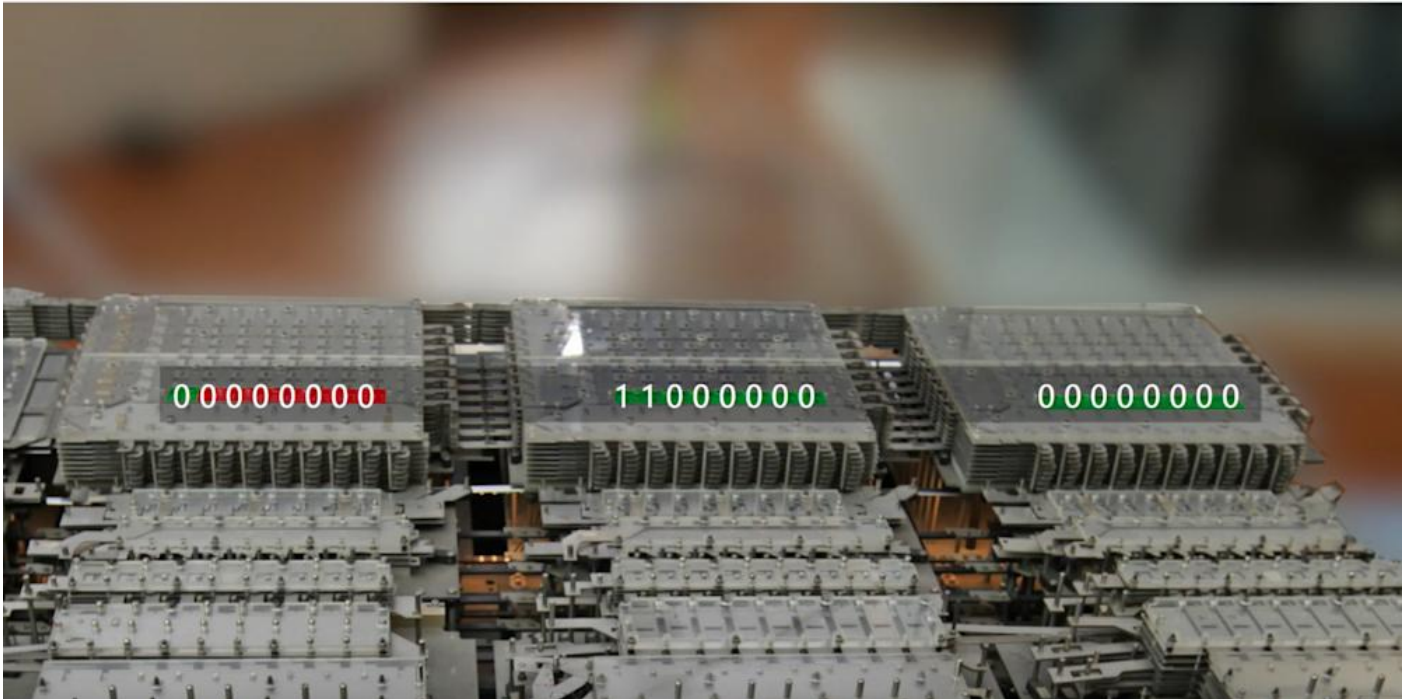


Image source: <https://www.youtube.com/watch?v=HDxs3-aJSAI>

Punch tape with the program!

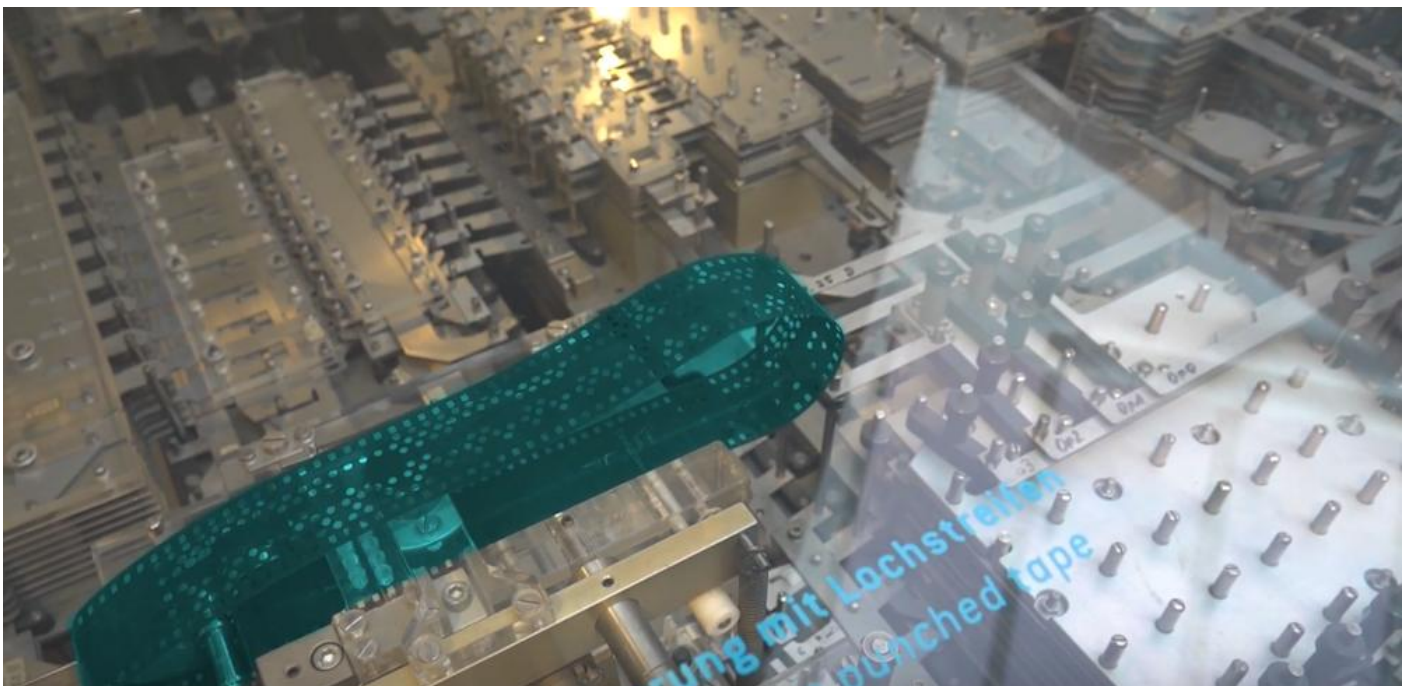


Image source: <https://www.youtube.com/watch?v=HDxs3-aJSAI>

Outcome of the Computation

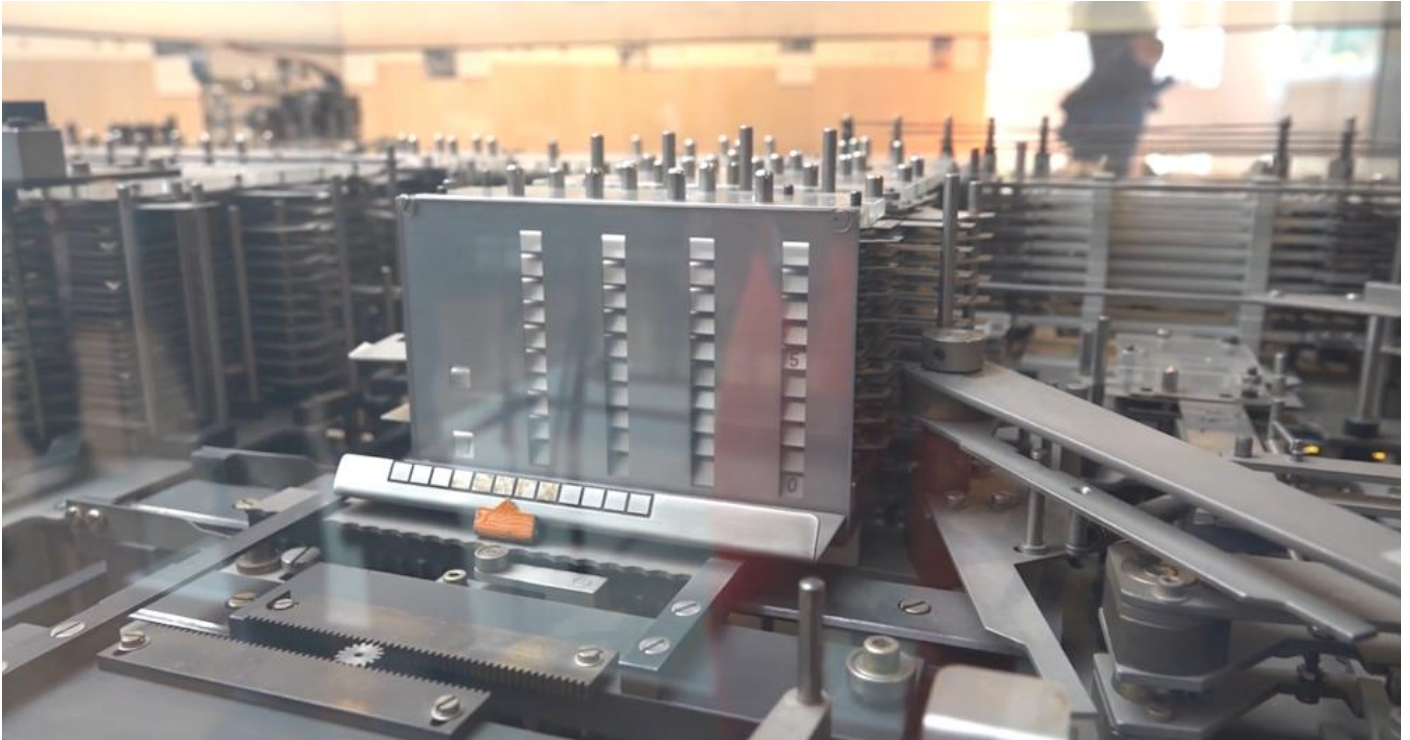


Image source: <https://www.youtube.com/watch?v=HDxs3-aJSAI>

For the curious, we would recommend Zuse's autobiography *The Computer - My Life*.

Post Image: " Image of Konrad Zuses (1910–1995) in the Bundesallee street in Berlin." by "Mellebga" licensed under [CC BY-SA 4.0](https://creativecommons.org/licenses/by-sa/4.0/)

This article was published on the Search Guard blog: <https://search-guard.com/blog/konrad-zuse/>
Search Guard is Security and Alerting for Elasticsearch and Kibana — search-guard.com · [Start a free trial](#)