

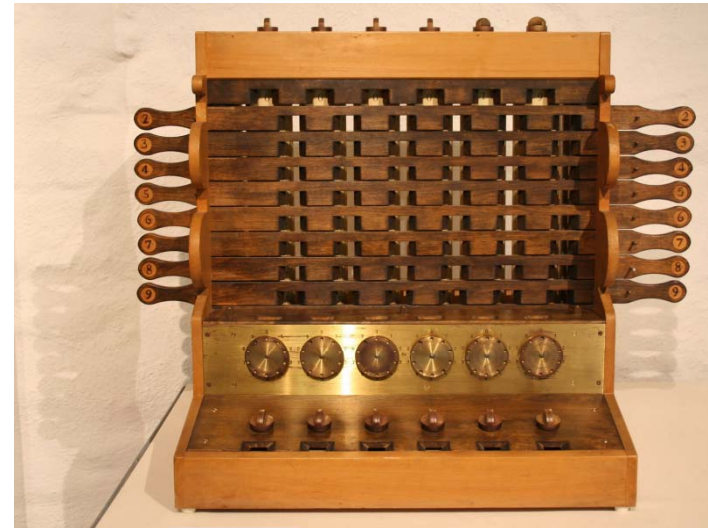


# Konrad Zuse

Der Erfinder des Computers

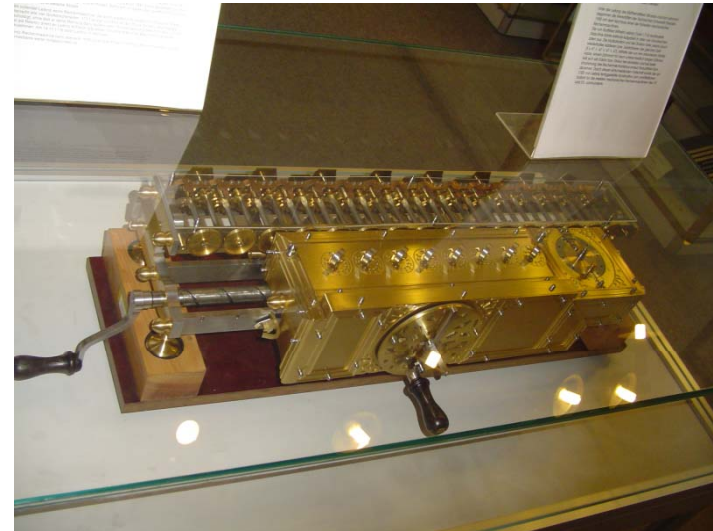
# But, didn't...

- ... Wilhelm Schickard invent the computer already in the 17<sup>th</sup> century?



# ... or wasn't it...

- ... Gottfried Wilhelm Leibniz already in the 18<sup>th</sup> century?



# ... or maybe...

- ... Charles Babbage in the 19<sup>th</sup> century?

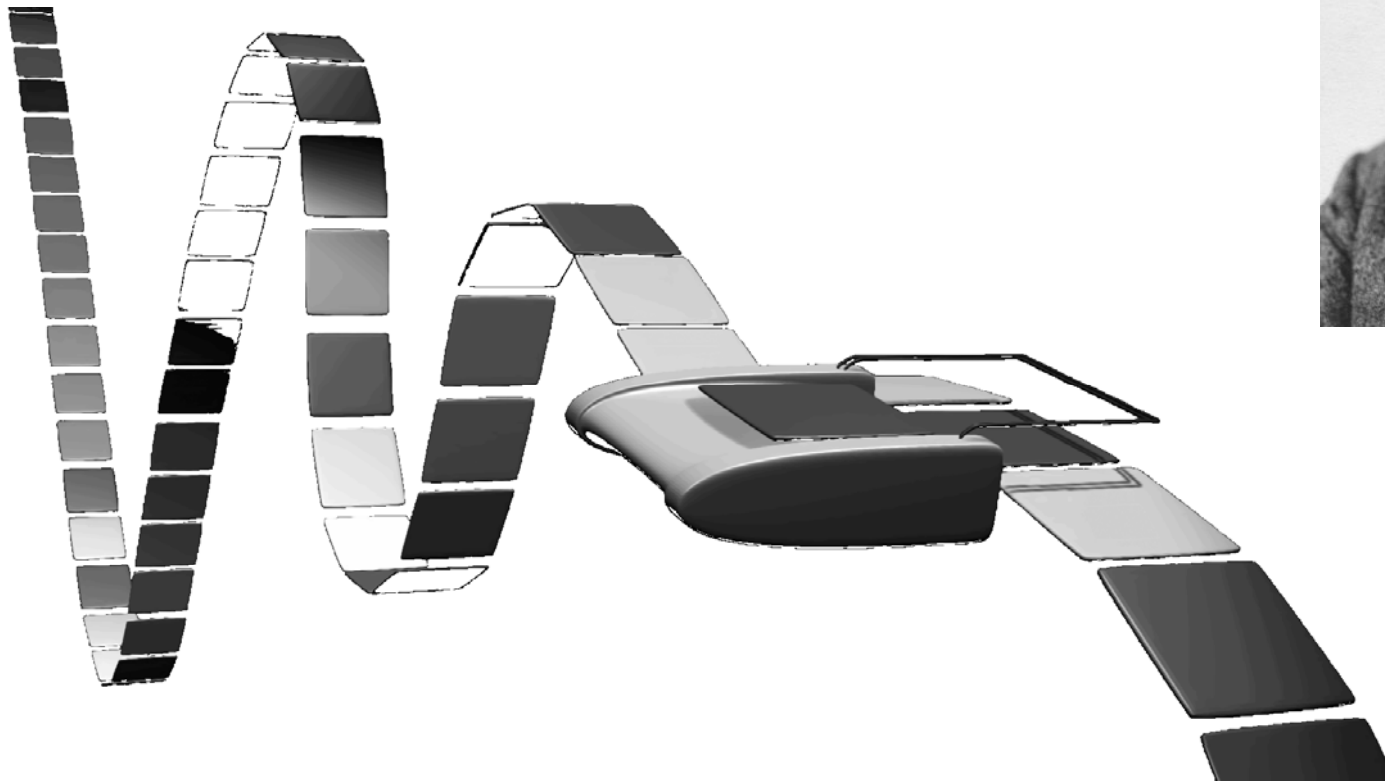
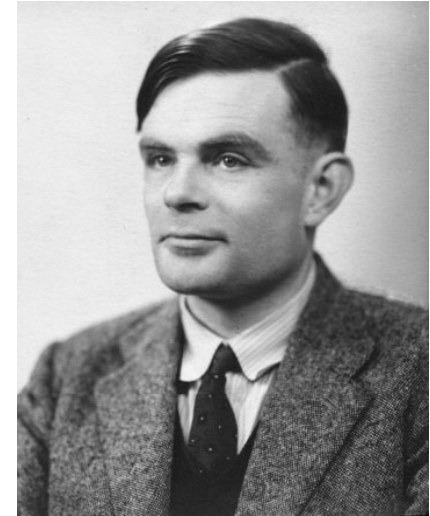


# Schickard, Leibniz, Babbage et al. ...

- ... invented calculating machines!
- *A calculator* is a device used to perform the basic operations of arithmetic.
- *A computer* is a programmable machine that receives input, stores and manipulates data, and provides output in a useful format.

# Computer aka Turing Machine

- Conceived in 1936 by Alan Turing





## Konrad Zuse

Inventor of the first functional program-controlled Turing-complete computer



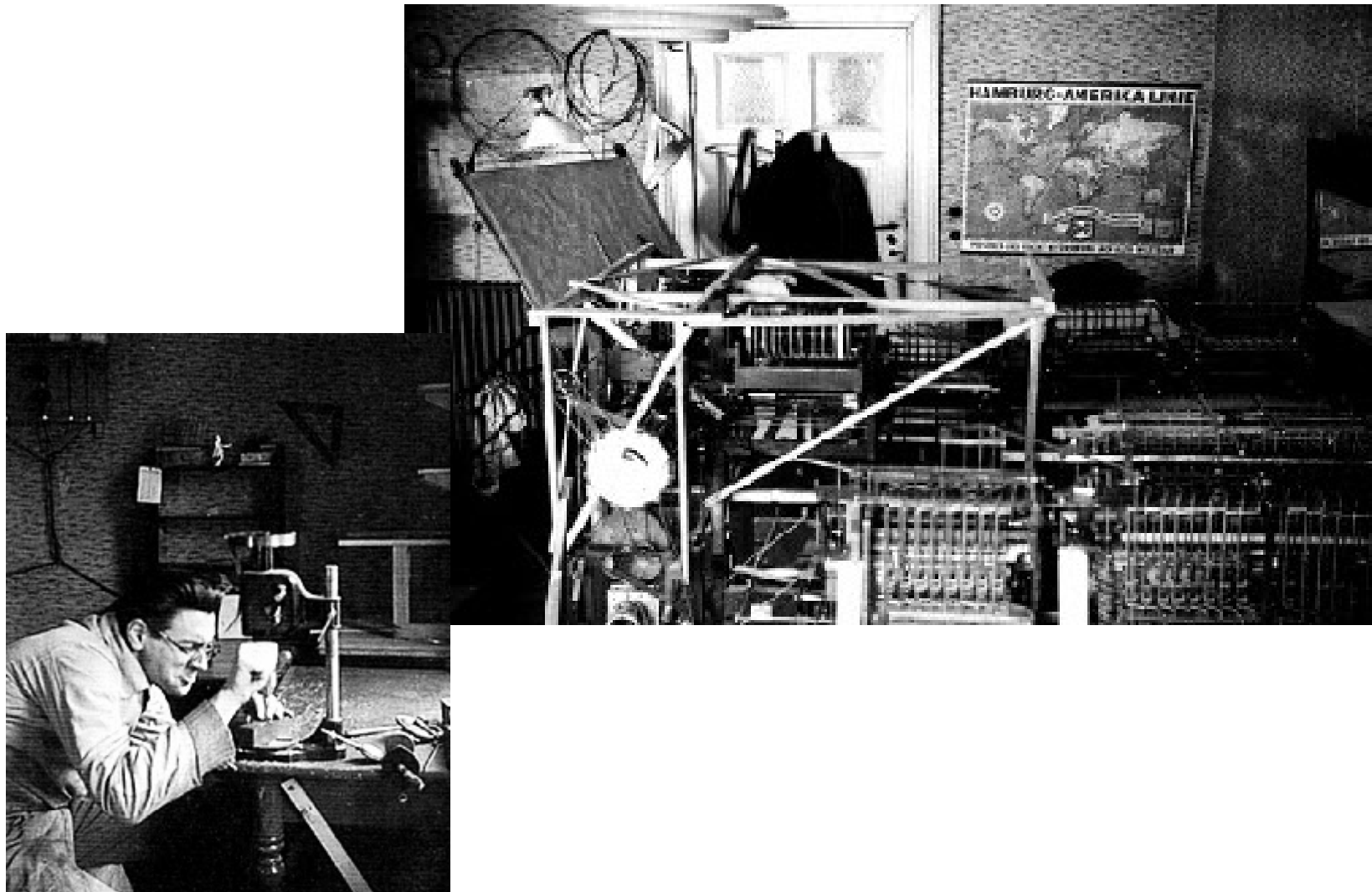
# Konrad Ernst Otto Zuse

- \* 22 June 1910  
in Berlin
- 1912 moved to  
Braunsberg
- 1923 moved to  
Hoyerswerda
- 1941 founded  
company in Berlin
- † 18 December 1995  
in Hünfeld n. Fulda





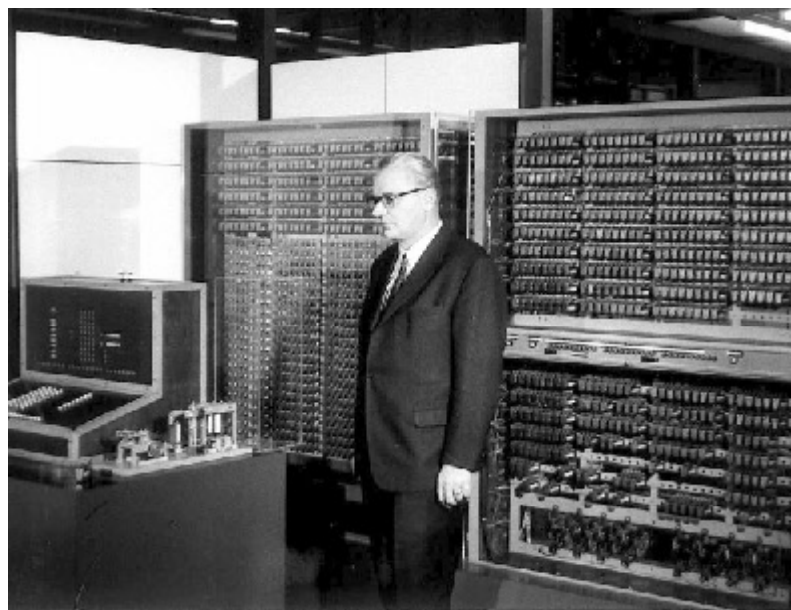
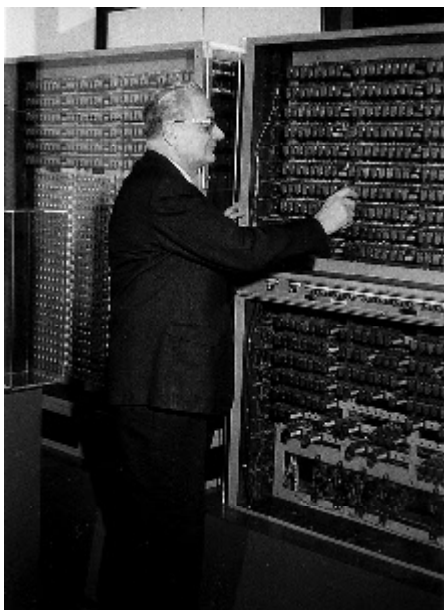
# The Z1 in Zuse's living room



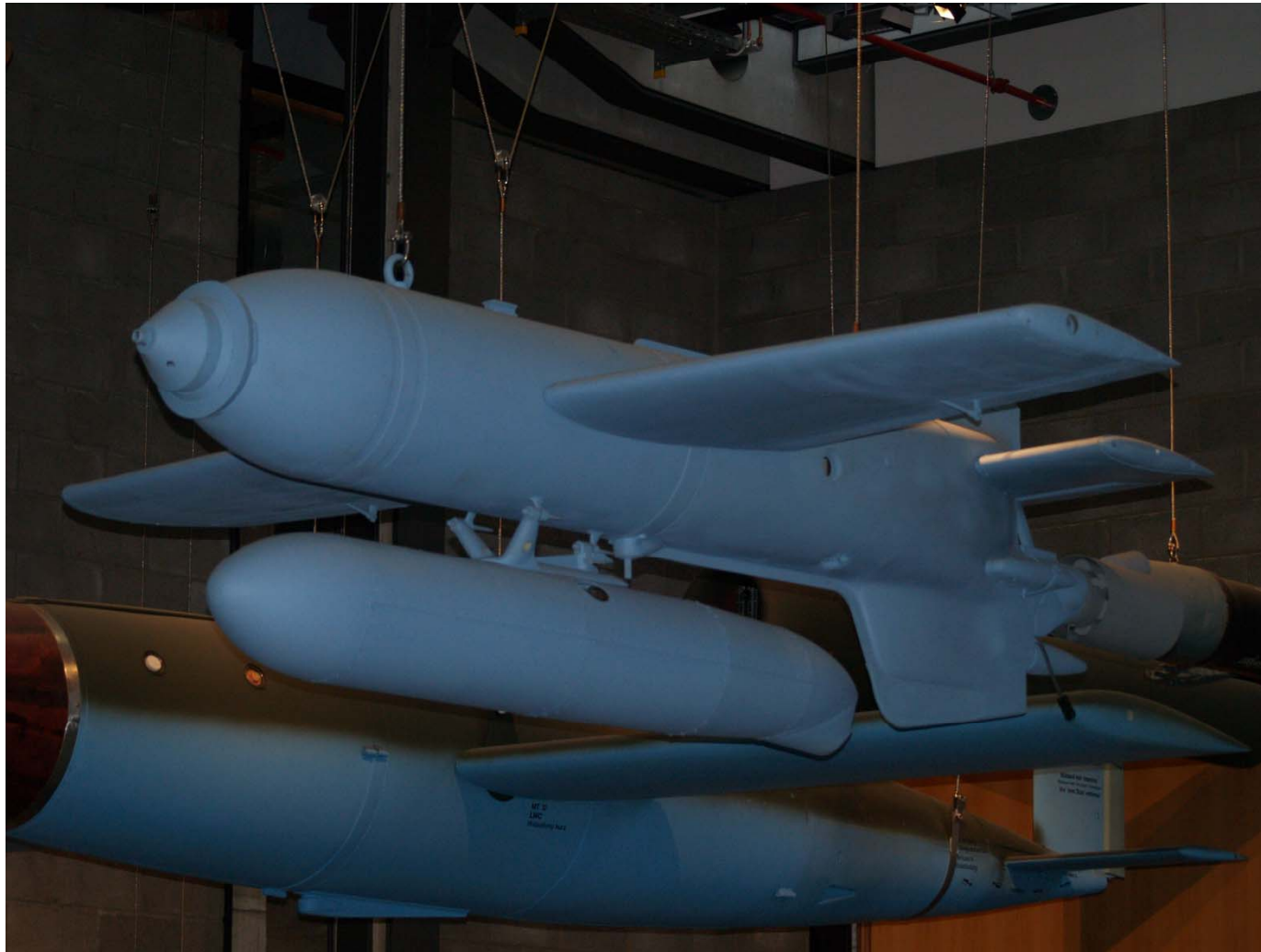
# Z1 replica in Berlin



# Zuse in front of a Z3 replica



# An Hs 293 glide bomb



# The Plankalkül

- The world's first high-level von Neumann programming language

```
P1 max3 (V0[: 8. 0], V1[: 8. 0], V2[: 8. 0]) => R0[: 8. 0]
max(V0[: 8. 0], V1[: 8. 0]) => Z1[: 8. 0]
max(Z1[: 8. 0], V2[: 8. 0]) => R0[: 8. 0]
END

P2 max (V0[: 8. 0], V1[: 8. 0]) => R0[: 8. 0]
V0[: 8. 0] => Z1[: 8. 0]
(Z1[: 8. 0] < V1[: 8. 0]) -> V1[: 8. 0] => Z1[: 8. 0]
Z1[: 8. 0] => R0[: 8. 0]
END
```

Zuse KG





# Z4 in Munich





# Z22 in Karlsruhe



# Graphomat Z64



# Calculating Space



# Konrad Zuse, *Großstadt*, 1964







# Konrad Zuse

Inventor of the von Neumann architecture

Inventor of the most widely used representation of floating point numbers

Founder of the world's first computer company

**Inventor of the first functional program-  
controlled Turing-complete computer**

Inventor of the first analog-to-digital converter

Inventor of the first process-controlled computer

Contributor to first cruise missile

Inventor of the first high-level programming language

Seller of the first functioning computer

Inventor of the first plotter

Inventor of the calculating space view on the world