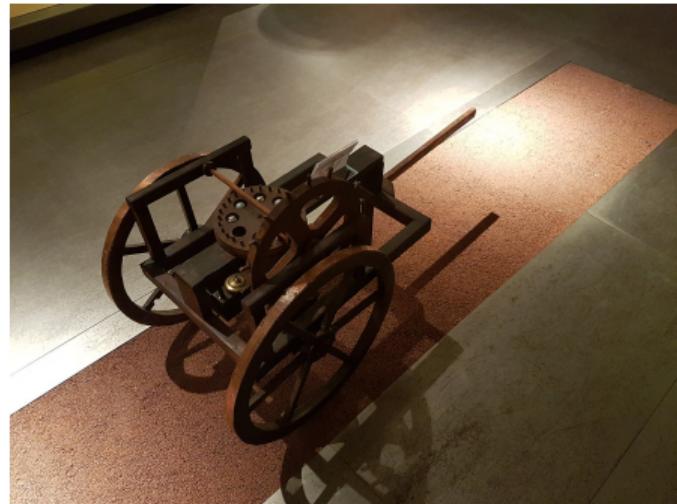


UNE HISTOIRE DE L'ARCHITECTURE DES ORDINATEURS

Dans l'antiquité

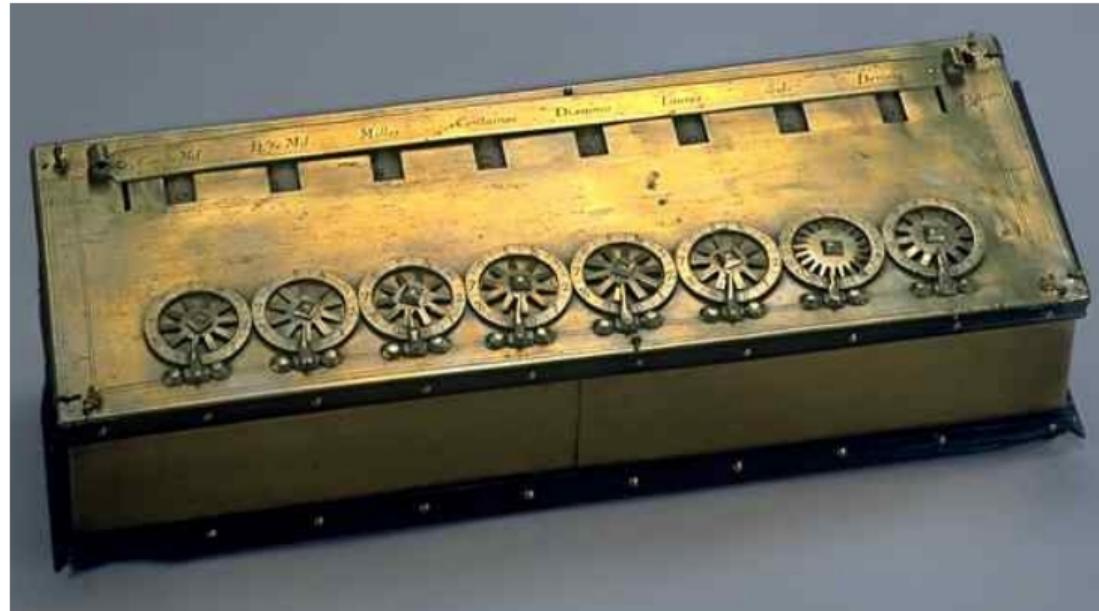


Machine d'Anticythère

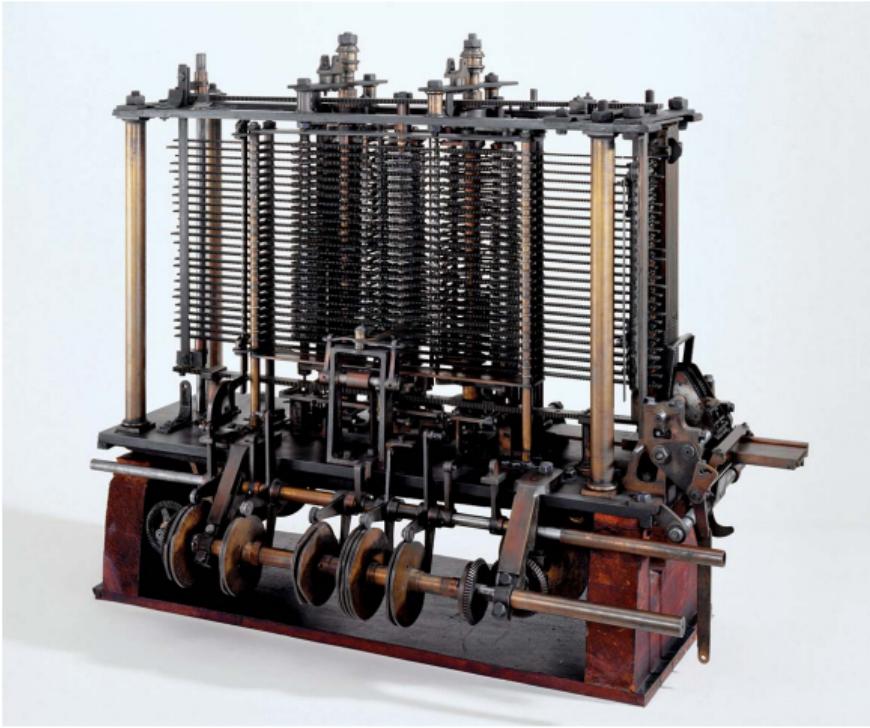
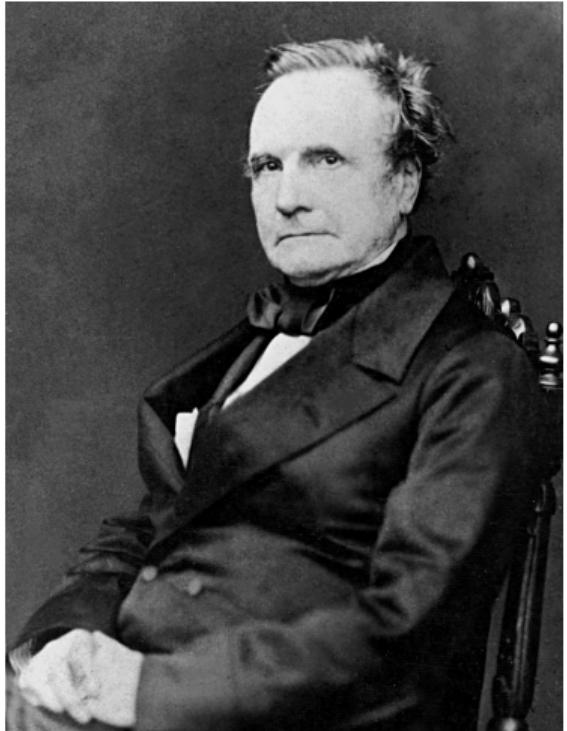


Odomètre de Héron d'Alexandrie

Pascaline – Pascal, 1642



Machine analytique – Babbage, 1834



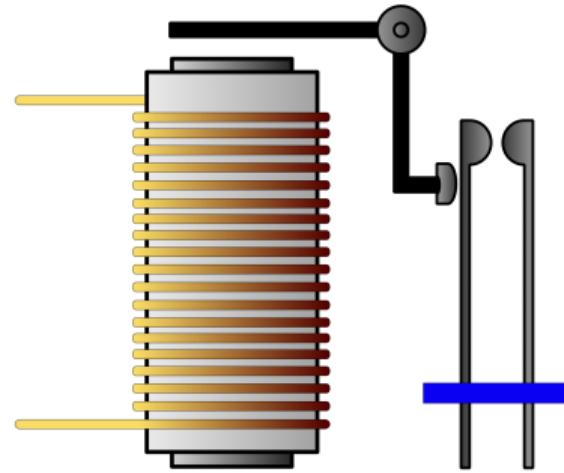
Premier programme informatique – Lovelace, 1843



A Symbolic Analysis of Relay and Switching Circuits – Shannon, 1937

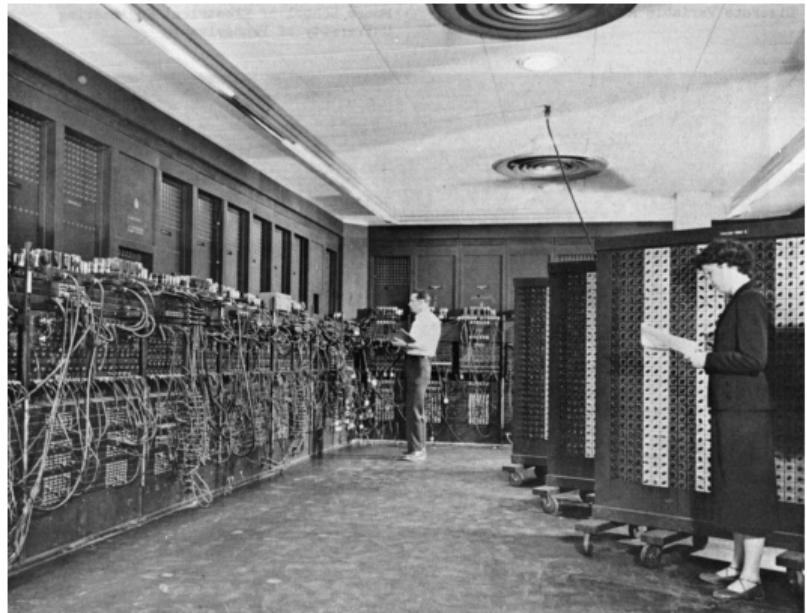


Claude Shannon



ENIAC – Mauchly et Eckert, 1945

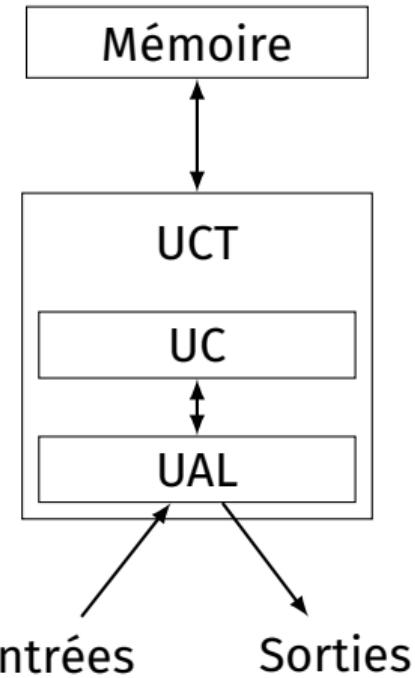
- Premier ordinateur électronique
- Comporte 17 468 tubes à vide



First Draft of a Report on the EDVAC – von Neumann, 1945



John von Neumann



Transistor – Bardeen, Shockley, Brattain, 1948



Circuit intégré – Kilby, Noyce, 1958



Jack Kilby



Robert Noyce

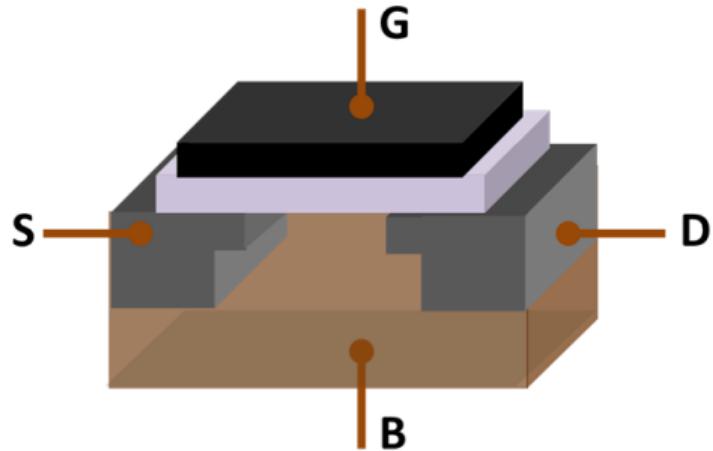
MOS Transistor – Atalla, Kahng, 1959



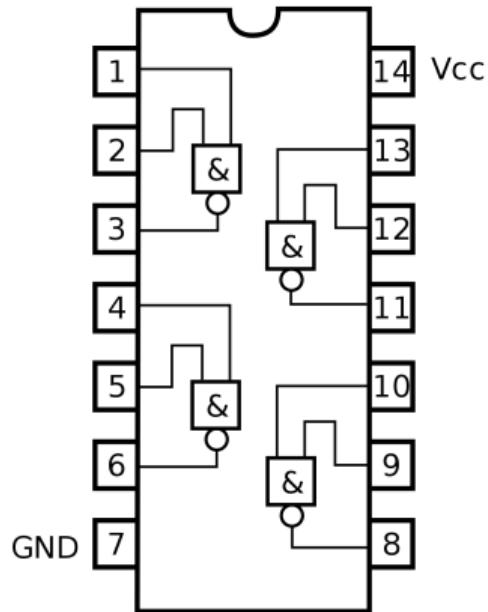
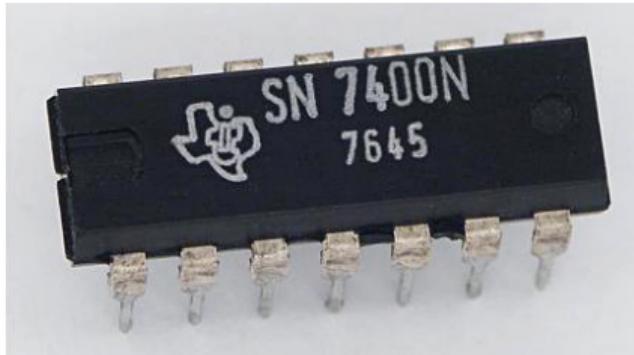
Mohamed Atalla



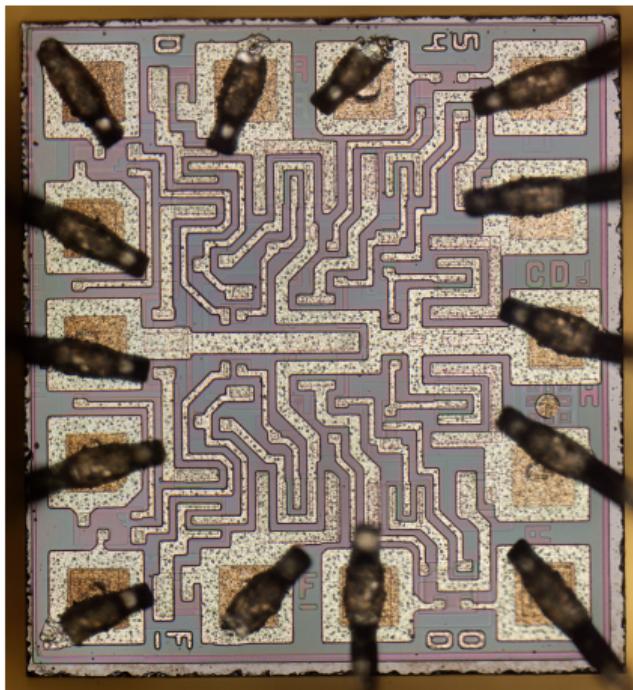
Dawon Kahng



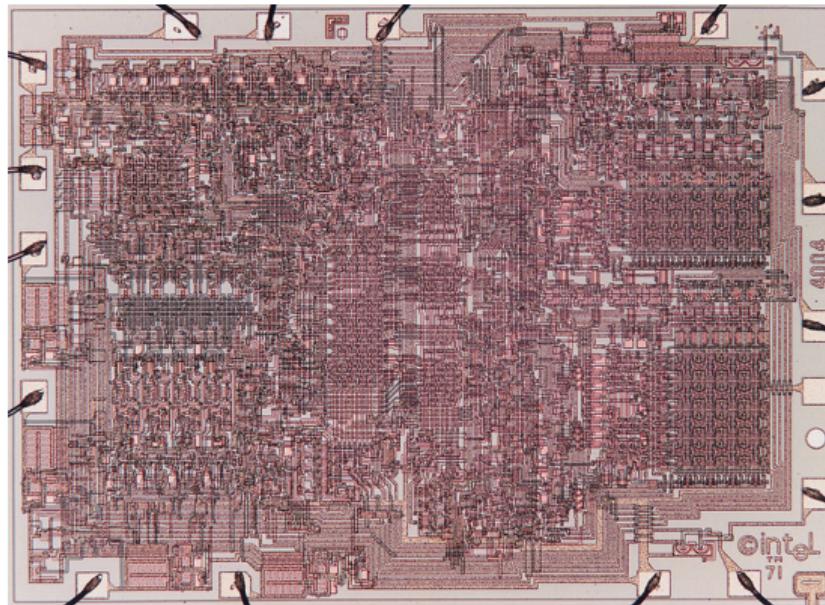
7400 – Texas Instrument, 1966



7400 – Texas Instrument, 1966

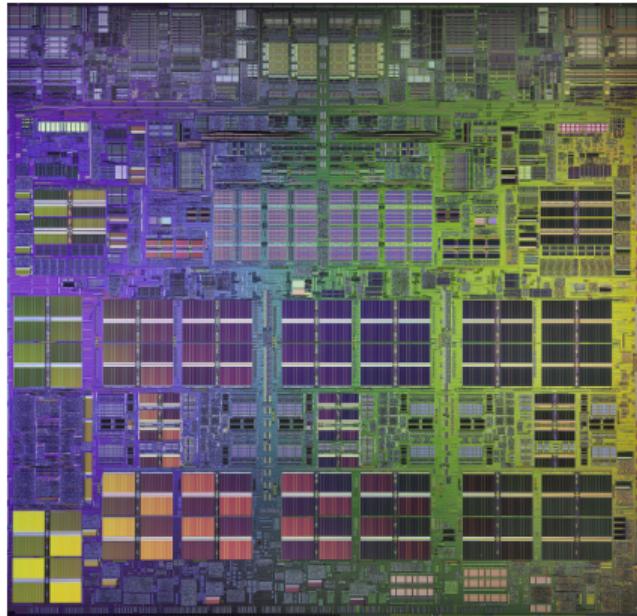


4004 – Intel, 1971



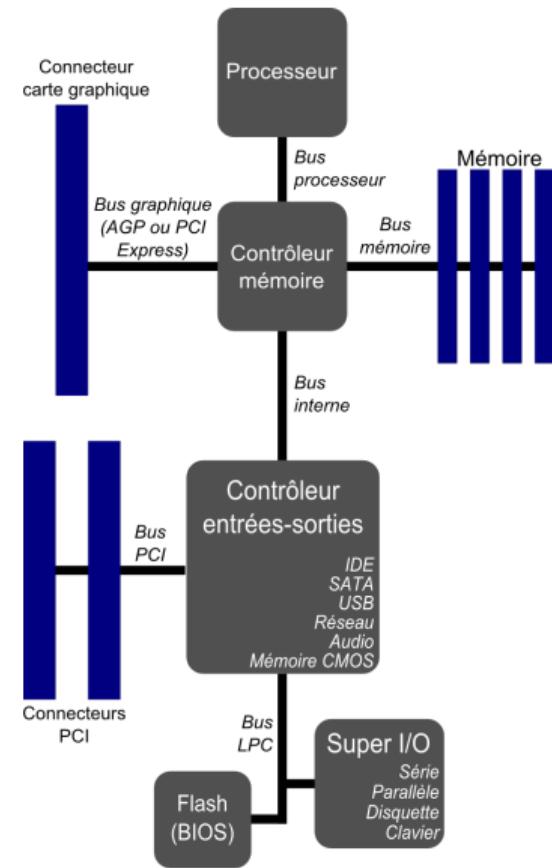
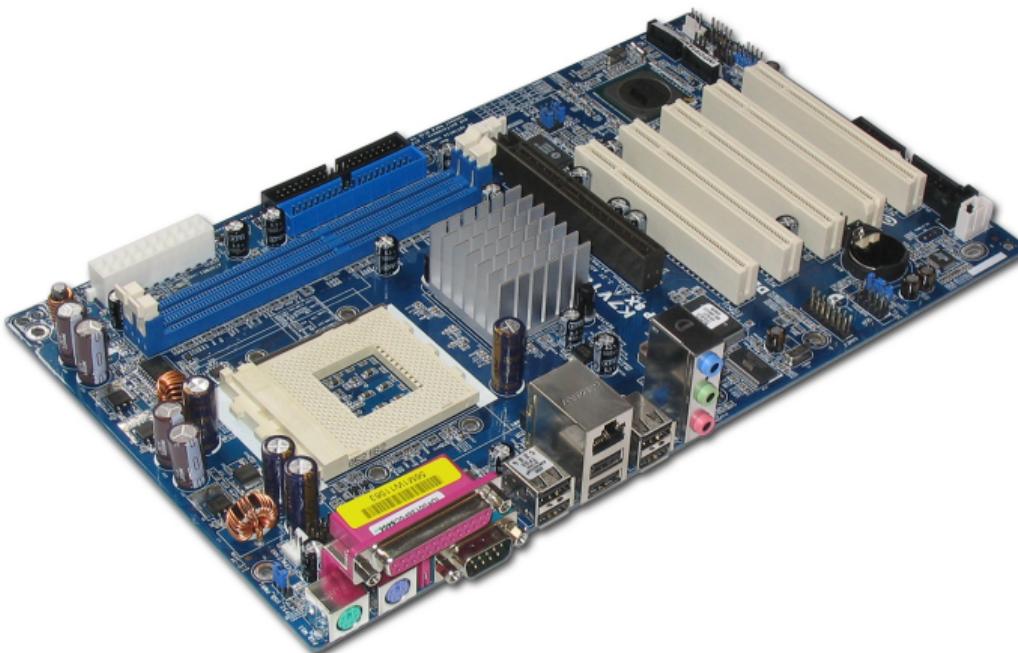
Sortie	Fréq.	Transistors	Surface	Gravure (nm)	
4004	1971	740 kHz	2300	12 mm ²	10 000

POWER4 – IBM, 2001



	Sortie	Fréq.	Transistors	Surface	Gravure (nm)
4004	1971	740 kHz	2300	12 mm ²	10 000
Power4	2001	1.1 GHz	174 000 000	412 mm ²	180

Architecture moderne, carte mère



Raspberry Pi 3 B+ – Raspberry Pi Foundation, 2018



Broadcom BCM2837B0

- 4 cœurs Cortex-A53 64-bit à 1.4GHz
- 1GB LPDDR2 SDRAM
- Wifi, Bluetooth
- Ethernet
- USB
- HDMI

Snapdragon 855 – Qualcomm, 2018

	Sortie	Fréq.	Transistors	Surface	Gravure
Intel 4004	1971	740 kHz	2300	12 mm ²	10 000
IBM Power4	2001	1.1 GHz	174 000 000	412 mm ²	180
Snapdragon 855	2018	1.8 GHz	6 700 000 000	73 mm ²	7