# Digital Systems on Chip (DSoC)

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European Chips Act

- 1 trillion microchips were manufactured around the world in 2020
- Funding of €43 billion by 2030
- https://www.european-chips-act.com/
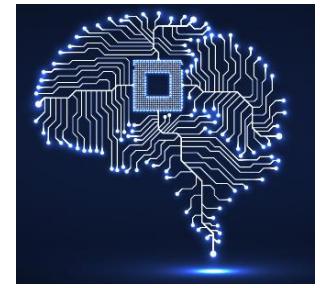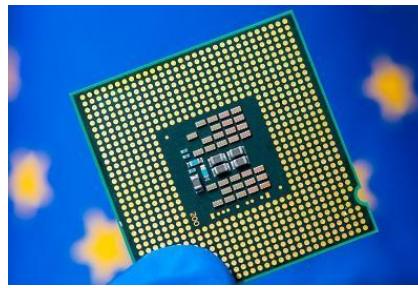
Nvidia Beats Forecasts Again, Even as Growth Inevitably Slows

Quarterly revenue and net income of Nvidia*

Revenue — Net income

US CHIPS Act

Total planned funding of $450 billion

https://www.semiconductors.org/chips/
https://www.semiconductors.org/chips-incentives-awards/

Research Areas

- Digital design of integrated circuits (chips)
- Design verification of integrated circuits (chips)
- Architecture exploration integrated circuits (chips)
- Validation of integrated circuits (chips) prototypes
- Software development for integrated circuits (chips)
- Software (web) development of IDE and EDA tools for integrated circuits (chips) – ASICDE
- Neural networks (AI) hardware acceleration
- Technologies:
  - ASIC (28 nm TSMC) + FPGA (Intel/AMD)
  - Verilog/SystemVerilog
  - RISC-V ISA

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Members

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Relevant Courses

- PPI – Princípy počítačového inžinierstva
- **SPRO – Špecifikačné prostriedky**
- SPAASM – Systémové programovanie a asemblery
- MIKROP – Mikropočítače
- **APS – Architektúra počítačových sysémov**
- VNOS – Vnorené systémy

- BP, DP, TP, DizP

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Thank you for your attention

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