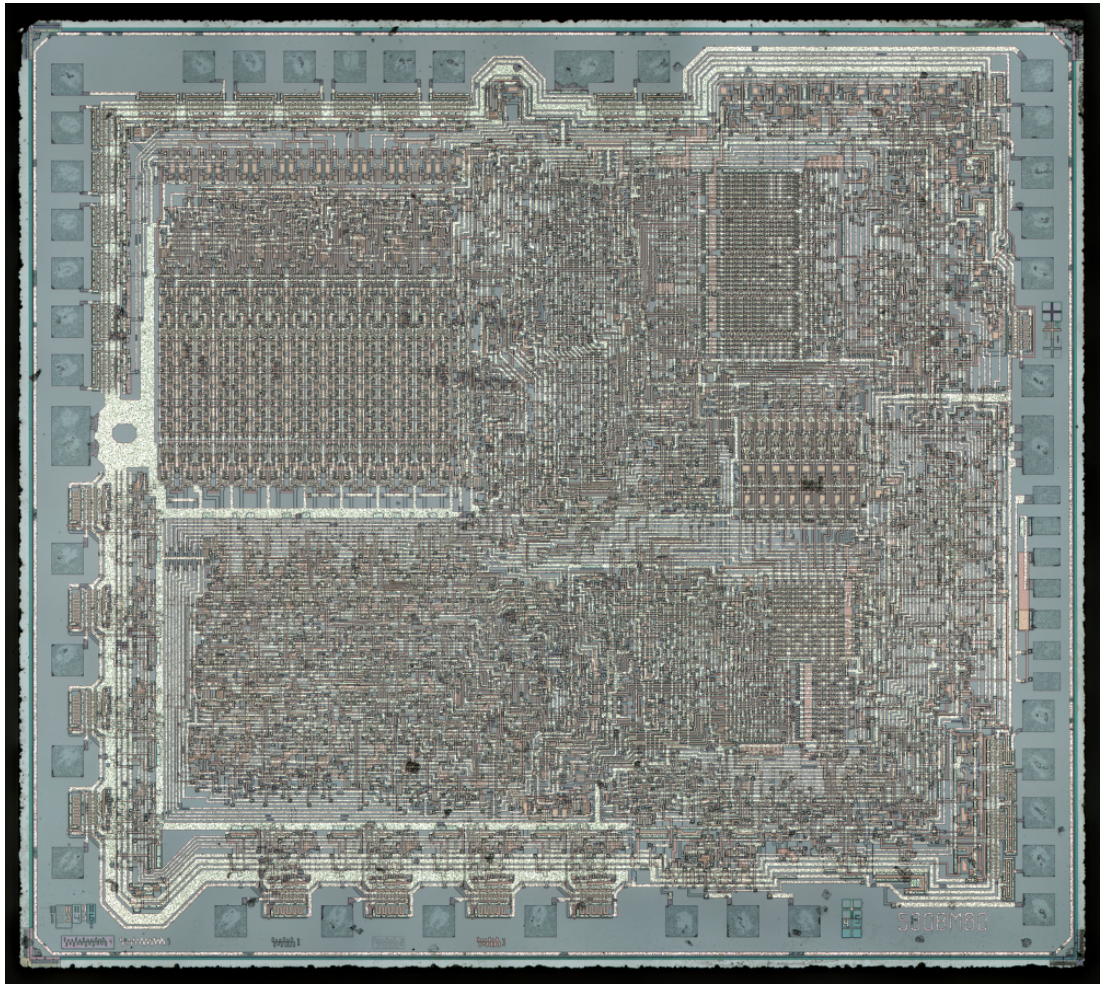
ELEC-H-473 Microprocessor Architectures

$\sim$

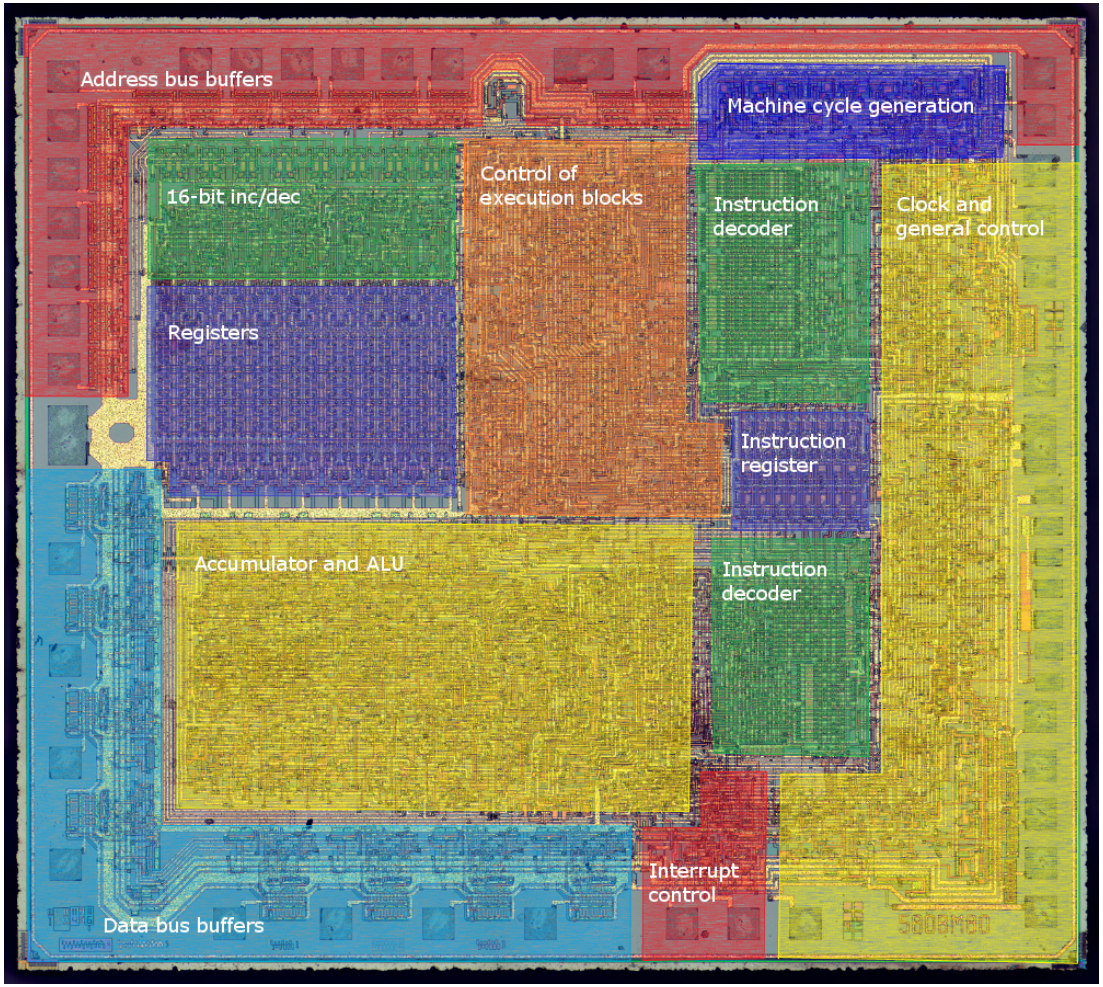
Short introduction to the labs

Practical discovery of microprocessors



KR580VM80A die shot, CC by http://zeptobars.ru

Practical discovery of microprocessors



KR580VM80A die shot, CC by http://zeptobars.ru

How does it work, for real ?

Plan

People involved

- Dragomir Milojevic

- Quentin Delhaye

- Amélia Struyf

The labs

Four microprocessor architectures:

- RiSC16: Very small RISC, 4 labs
- dsPIC33: Microcontroller, also RISC, 1 lab
- TIS-100, 1 lab
- x86_64: Standard computer microprocessor (CISC), 3 labs

Ok, fine, where do we start ?

- All handouts are on the UV, ELEC-H-473.
- Form groups of 4 students and **enroll in a group on the UV**.
- Assignments have to be submitted on the UV.
  The deadline is one week after the related lab.
- No group, no submission possible.
  Beyond the deadline, no submission possible.
- All assignments will be evaluated for 25% of you final exam mark

RiSC 16

4 labs (1-4) :

- Discover the RiSC16 and its 8 instructions ISA
- Adapt the architecture
- Enhance it with a pipeline
- Finish everything

Assignments :

- Tested and verified codes (lab 1-2)
- Codes and Test vectors (lab 3)

Use the "**Online Verification Tool**" to check your codes

Lab	Topic	Assignment
1	RISC 1-2	✖
2	RISC 1-2	✔
3	RISC 3	✔
4	RISC 4	✖
5	dsPIC	✖
6	TIS-100	✔
7	SIMD 1	✔
8	SIMD 2	✔
9	Multithreading	✖