# Programming Parallel Computers



## Lectures



### Week 1

The lecture videos are available both on YouTube and on Panopto, in up to 4K resolution, with English subtitles. The slides are also available in the PDF format.

### Lectures

YouTube playlist with all parts of the lecture.

**Part 1A: What is this course about? · Why parallelism?** (14 min)

- Lecture on YouTube
- Lecture on Panopto
- Slides

**Part 1B: Course practicalities** (10 min)

- Lecture on YouTube
- Lecture on Panopto
- Slides
- This video introduces the submission system we use in this course, and also explains the basic principles related to e.g. collaboration. Please note that the video was prepared in 2021, and it also refers to some details of the previous implementation of the course. Please see the MyCourses page for the latest updates on the course arrangements in 2023. In particular, in 2023 we will use Sisu for course registration, and our lectures and exercise sessions will be held in person on campus.

**Part 1C: Sample application · Memory access pattern** (14 min)

- Lecture on YouTube
- Lecture on Panopto
- Slides

**Part 1D: Instruction-level parallelism** (12 min)

- Lecture on YouTube
- Lecture on Panopto
- Slides

### Topics covered

- Course practicalities and the submission system
- Chapter 1: why parallelism
- Chapter 2, V0: baseline implementation
- Chapter 2, V1: linear reading
- Chapter 2, V2: instruction-level parallelism