

LAB 01: CONCORRÊNCIA E PARALELISMO (11158)

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I'm Alex, a Professor Auxiliar in the department since February 2023

I'm from the United Kingdom originally

Previously, I worked as a cryptography researcher in the technology industry

I do research in the area of developing practical Internet protocols with privacy-preserving properties

Aims:

To learn the fundamentals behind developing algorithms/programs that make use of **parallel** programming and **concurrency** techniques

Labs:

Experiment with **technologies** and **frameworks** that allow us to build parallel programs

Intended outcomes:

1. To be able to **analyse** and **identify** situations in which programs could benefit from parallelism and concurrency
2. To be able to **scientifically reason** about how parallelism has impacted performance

- ◇ For ~eight¹ weeks, you will be given an assignment on a new theme to complete
 - ▷ The assignments are not graded, and are intended only to develop your understanding
- ◇ In the remaining weeks, you will be working on a graded project to complete
 - ▷ The project task will use the same principles and methods that will be used in completing each of the assignments
- ◇ Every week, I will be here to help with questions, problems, and anything else

¹Exact number may change.

<https://aulas.alxdavids.xyz/pergunta/qfcc375>



To run a **Monte Carlo** simulation to estimate the value of π



- ◇ Assignment PDF:

<https://github.com/MEI-CP/lab-assignments/>

- ◇ The assignment will first introduce you to using **git** and **GitHub**
- ◇ After that, you will proceed with the main task

Remember: **git** and **GitHub** are your friends.

<https://aulas.alxdavids.xyz/pergunta/q440e4e>



<https://aulas.alxdavids.xyz/pergunta/qbc4850>



<https://aulas.alxdavids.xyz/pergunta/q68cedd>



Don't worry if you didn't reach a complete solution

Next week we will be working on the same problem but using C

The principles you applied here
will still be valid

My office hours are 14:00-16:30 on Tuesdays

See you next week!