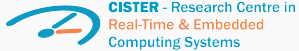
1. Concurrent programming (Part II)

Nelma Moreira & **José Proença**

Concurrent programming (CC3040) 2024/2025

CISTER – U.Porto, Porto, Portugal

https://fm-dcc.github.io/cp2425



Contents of this module

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Blocks of sequential code running concurrently and sharing memory:

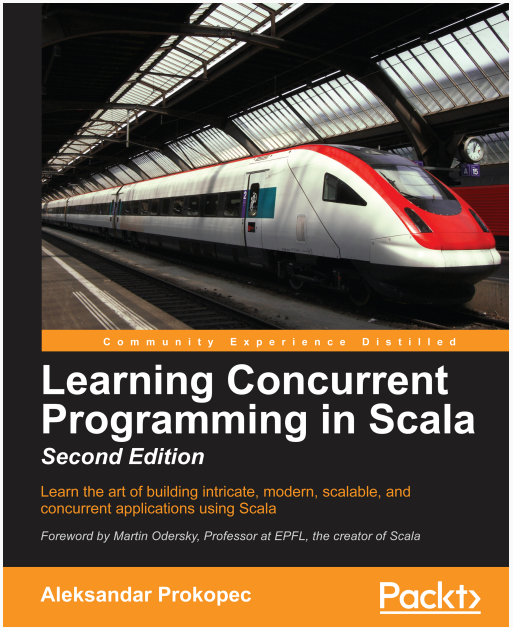
- What is **Scala** and why using it?
- Concurrency in Java and its memory model
- Basic concurrency blocks and libraries
- Futures and promises (maybe)
- Actor model

We will be **less formal**

- focus on concepts and programs
- study operators and libraries
- tool support with **Scala**

We will have **hands-on**

- Practical programming exercises
- Apply the concepts we learn


Community Experience Distilled
Learning Concurrent Programming in Scala
Second Edition
Learn the art of building intricate, modern, scalable, and concurrent applications using Scala
Foreword by Martin Odersky, Professor at EPFL, the creator of Scala
Aleksandar Prokopec
Packt

Logistics

Useful information

Relevant class material and announcements will be posted on the website periodically

`https://fm-dcc.github.io/cp2425`

Lecturers

- Nelma Moreira
  `https://www.dcc.fc.up.pt/~nam/`
- nelma.moreira@fc.up.pt
- office hours: tbd

- **José Proença**
  `https://jose.proenca.org`
- jose.proenca@fc.up.pt
- Thursday afternoon

(Please send an email the day before if you wish to meet)

Grading

Grading will consist of:

- **40%** (T1) – individual test for part 1 (≥ 6)
- **30%** (T2) – individual test for part 2 (≥ 6)
- **70%** (FE) – individual final exam for parts 1 and 2
- **30%** (**CW**) – **course work** for parts 1 and 2
  - groups of at most 2 students
  - **10%** for part 1
  - **20%** for part 2

Normal period

$T1 \times 0.3 + T2 \times 0.4 + \mathbf{CW} \times 0.3 \quad (\geq 9.5)$

Mandatory 25% attendance in PL

Extra period (*recurso*)

$FE \times 0.7 + \mathbf{CW} \times 0.3 \quad (\geq 9.5)$