

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>



CENTRO DE
MATEMÁTICA
UNIVERSIDADE DO PORTO



CISTER - Research Centre in
Real-Time & Embedded
Computing Systems

Contents of this module

Blocks of sequential code running concurrently and sharing memory:

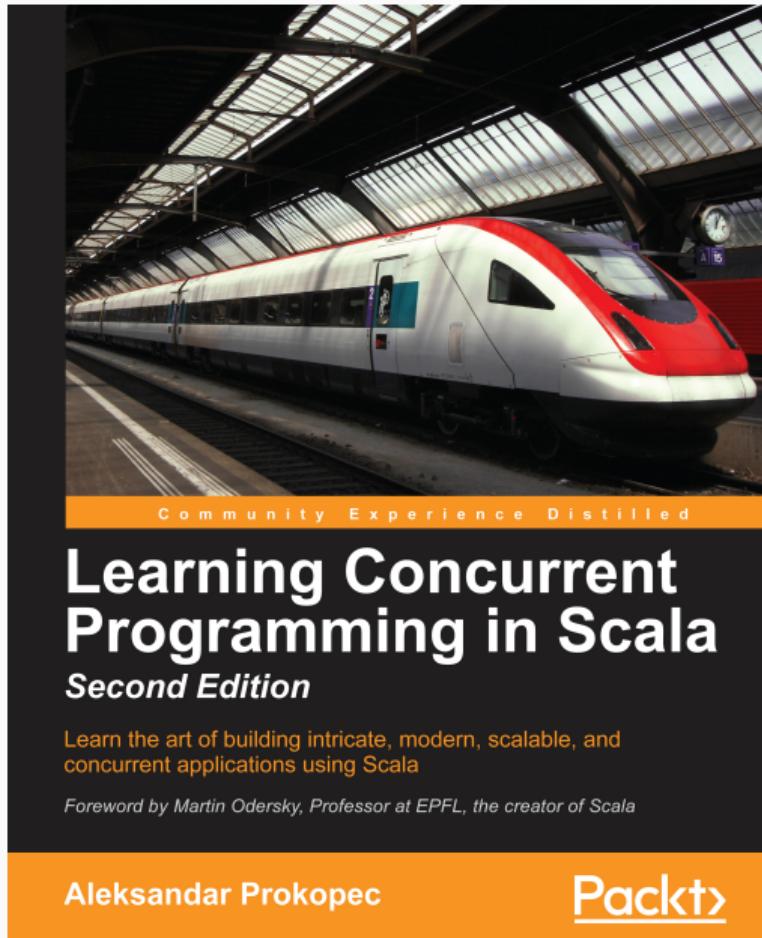
- What is **Scala** and why using it?
- Concurrency in Java and its memory model
- Basic concurrency blocks and libraries
- Futures and promises (maybe)
- Actor model

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



Logistics

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 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

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

Mandatory 25% attendance in PL

Extra period (*recurso*)

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