

1. Concurrent programming (Part II)

Nelma Moreira & José Proença

Concurrent programming (CC3040) 2023/2024

CISTER – U.Porto, Porto, Portugal

<https://fm-dcc.github.io/pc2324>



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
- Actor model (maybe)

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

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

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https://fm-dcc.github.io/pc2324
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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
- office hours: 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*)

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