

DIDA

Design and Implementation of Distributed Applications

Luís Rodrigues

Roadmap

- Goals
- Myself
- Syllabus
- Bibliography
- Evaluation
- Important Dates
- Web page
- Paper presentations

Goals

- Understand the challenges of building large-scale, geo-distributed systems:
 - Asynchrony
 - Concurrency
 - Reconfiguration
 - Large number of nodes

Myself

- Luís Rodrigues
 - <https://www.dpss.inesc-id.pt/~ler/>
 - ler@tecnico.ulisboa.pt (personal)
- For course related emails
 - dad@meic-meti-dad.tecnico.ulisboa.pt
- Office hours
 - Alameda: Thursdays, 16:30-18:30, INESC-ID Alameda, Office 508
 - Tagus: Tuesdays, 14:00-16:00, 2N1.25, Taguspark

Syllabus

- Intro (this class)
- Consensus in partially synchronous systems (4 classes)
- Reconfiguration (3 classes)
- Data Replication (3 classes)
- Peer-to-peer systems (3 classes)

Bibliography

- Distributed Systems, concepts and design”, George Coulouris, Jean Dollimore, Tim Kindberg, Gordon Blair, 5th edition, Pearson.
 - Excellent reference but a bit outdated
- Selected set of papers:
 - Paxos
 - Zookeeper
 - Spanner

Evaluation

- Exam (45%)
 - Minimum grade 8
- Project (45%)
 - Groups of 3
 - Checkpoint (0%-15%)
- Presentation (10%)
 - Groups of 3

Important dates

- 04-10-2024: Project checkpoint
- 25-10-2024: Project final delivery
- 06-11-2024: Exam 1
- 21-01-2025: Exam 2

Groups

- Registration of groups to Labs
 - via Fénix, has already started
 - Groups of **exactly** 3 students
 - Groups will collaborate for:
 1. Project
 2. Presentation of one paper
 - A google doc was created to facilitate group creation:
 - Fénix: “Project and Presentation” → “Incomplete Groups page”
 - add your name there if your group is incomplete
 - non-moderated: use it in a sensible way!
 - it is important to converge soon: ACT FAST!
- Do you want to “re-use” last year’s project?
 - Send an email with subject “Reuse last year’s project” to:
 - dad@meic-meti-dad.tecnico.ulisboa.pt