

Operating Systems: Design and Implementation

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Professors

Course: Paul Irofti

Laboratory: Costin Grigore

Organisation – Lab

Lab **50 points** – every two weeks

Points

- ▶ **minimum 25** points for exam entry

Presence

- ▶ **mandatory presence** at all labs
- ▶ without attending you can not take the exam
- ▶ if you skip one lab you can retake it in the other week

Retakes, reexamination

- ▶ lab can only be promoted during the semester
- ▶ you can only retake the labs during the first semester during labs hours
- ▶ you can not retake the exam before the reexamination or in the second semester

Organisation – Exam

- ▶ Exam 50 points – **minimum 25** points to pass
- ▶ you have to write and present a survey paper
- ▶ the paper has to have at least 4 pages double-columned
- ▶ papers are elaborated in teams of maximum 3 students
- ▶ paper LaTeX template can be found on [Overleaf](#)

- ▶ Recap: processes, paging, file-systems MODULE 0
- ▶ Virtual Machines

- ▶ Buffer Overflow MODULE 1
- ▶ Return-to-libc Attacks
- ▶ Address Space Layout Randomization
- ▶ Return Oriented Programming

- ▶ Timing Attacks MODULE 2
- ▶ Cache Attacks
- ▶ Meltdown and Spectre Attacks
- ▶ Rowhammer Attacks

- ▶ Statistical clock drivers MODULE 0 (cont.)
- ▶ Functional Correctness and Security Proofs: seL4 and Genode

Enjoy and happy hacking!

Questions?