EE-490(f)

Lab in signal and image processing

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Cursus	Sem.	Type
Electrical and Electronical Engineering	MA2, MA4	Opt.

Language of teaching	English
Credits	4
Withdrawal	Unauthorized
Session	Summer
Semester	Spring
Exam	During the semester
Workload	120h
Weeks	14
Hours	**4 weekly**
Practical work	4 weekly
Number of positions	**12**

It is not allowed to withdraw from this subject after the registration deadline.

Summary

These lab sessions are designed as a practical companion to the course "Image Analysis and Pattern Recognition" by Prof. Thiran. The main objective is to learn how to use some important image processing libraries, namely OpenCV, for performing image analysis tasks.

Content

The lab will contain two main parts:

- Feature extraction
- Object detection
- Object tracking

For each of them, a series of exercises will be proposed, to be solved by groups of 2 students. Each assignment will have to be completed in 3 to 4 weeks.

Keywords

image processing, computer vision, OpenCV

Learning Prerequisites

Required courses

Signal Processing

Recommended courses

Pattern Recognition and Image Analysis

Learning Outcomes

By the end of the course, the student must be able to:

- Design image analysis systems
- Implement it with state-of-the-art libraries

Teaching methods

assignments (mini-projects)

Assessment methods

Report of each assignment