Welcome!
Course overview

Computer Assisted Image Analysis II,
Spring 2017
Nataša Sladoje
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http://www.it.uu.se/edu/course/homepage/bild2/v17
Image Analysis II – Overview

- 15 + 1 lectures
  - in rooms 2345 or 2344
  - schedule on the course web page
  - It is good to read material before coming to class!

- 3 lab exercises
  - Location: ITC/2315 (see schedule)
  - if finished on time, each adds 1 point to the exam (out of 40)

- Project
  - Team work
  - Presented at the end of the course (see schedule)

- Written exam
  - with cheat-sheet
“Image Processing, Analysis, and Machine Vision”, by Sonka, Hlavac and Boyle

Lecture slides and additional material put up to download from the course website.
Image Analysis II – Lecturers

**Lecturers:**
- Nataša Sladoje
- Anders Brun
- Maxime Bombrun
- Filip Malmberg
- Robin Strand
- Sajith Kecheril Sadanandan
- Carolina Wählby

**Lab assistants:**
- Kalyan Ram
- Damian Matuszewski
# Image Analysis II – Labs

## Schedule (on the course page)

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## Place:  ITC/2315

- In groups of 2 students.
- Start preparing on time!
- Come prepared and use lab sessions to get help and hints.
- Written report is required!
- Correct report handed in before the stated deadline adds 1 bonus point to the exam.
- Labs bring 40/100 credits!
Image Analysis II – Projects

In groups of 2 students.
Every group works on a different project.

Project selection:
  - Some suggestions on the course page (soon!).
  - If you have a good idea for a project of your own, please talk to me first.

Project plan
  - Should be e-mailed to me by January 30
  - 1-2 pages of description what should be done and how.
  - Each group will review another group’s plan.
Image Analysis II – Projects

Work on the project

- Do not hesitate to ask for help.
- Send an e-mail to schedule a meeting, if needed.
- Projects require time - Start working asap!
- Project reports should be prepared (instructions are on the course page) and sent to me not later than March 3.

Presentation of projects

- Wednesday March 8, 9-12 and 13-16
- Room TBA
- 10 minutes each group.
- Project brings 20/100 credits to the overall score.
Image Analysis II – Written Exam

Friday, March 10
Time and location will be known later.

Some examples of the exam are on the course page – take a look!

You can bring one A4 sheet with hand-written notes
Making these notes is a good way to study.

Sign up for exam! This is now mandatory.
Registration is open Jan 30, 2017 – Feb 26, 2017.

Exam brings 40/100 points to the overall score.
Image Analysis I

What you are expected to know already:

- Pointwise image operators
- Local image operators
- Fourier analysis of images
- Mathematical morphology and distance transforms
- Image segmentation
- Object description
- Classification
- Color images and image compression
What we will cover in this course:

- Convolution, Fourier transform, sampling, thresholding (Nataša)
- Filtering (2 lectures) (Nataša)
- Mathematical morphology (Maxime)
- Digital geometry (2 lectures) (Robin)
- Image registration, geometric transformations (Nataša)
- Method evaluation and experimental design (Carolina)
What we will cover in this course (cont.):

- Model-based and graph-based segmentation (2 lectures) (Filip)
- Motion (Anders)
- Computer vision (Anders)
- Classification (Anders)
- Fuzzy set theory in image analysis (Nataša)
- Deep learning (Sajith)

- Repetition (Nataša)