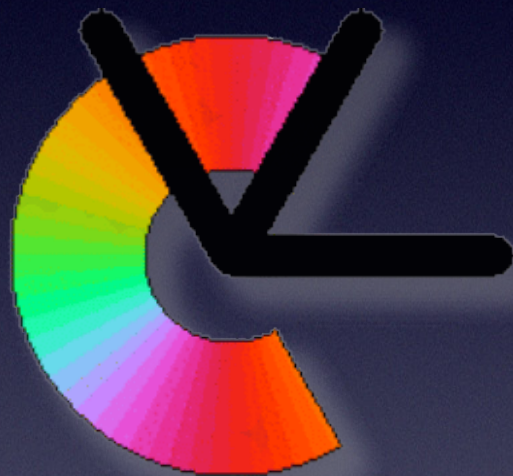


# Masters Thesis Supervision

Introductory seminar



**Per-Erik Forssén**  
**Computer Vision Laboratory**  
**Department of Electrical Engineering**  
**Linköping University**

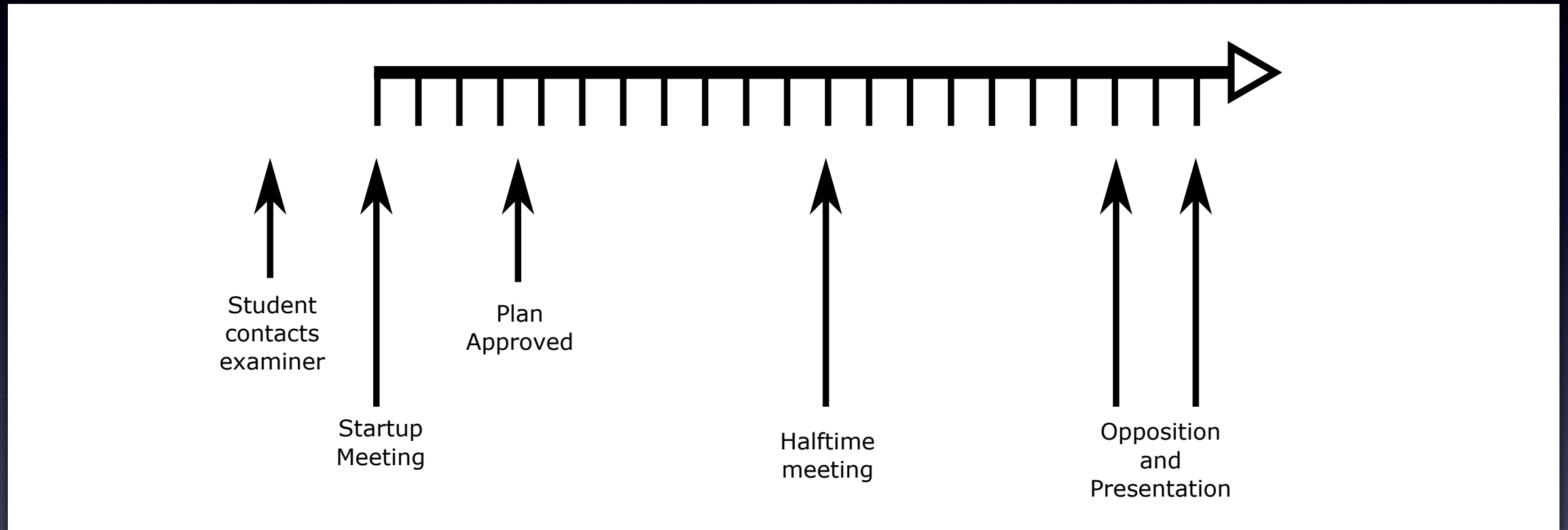


# Why this course?

- There are many master students each year
- During your PhD studies you will supervise many masters (on average 15)
- We need to maximise utility of supervision:  
$$U = \text{benefit}/\text{time\_spent}$$
- Good ideas on supervision should be shared



# Why this course?



- A Master's thesis is nominally 20 weeks.
- The students need proper guidance if they are to finish on time.



# Who is here?

- Examiners: Per-Erik, Maria
- 8 PhD students:
  - Cuong Le
  - James Waguespack
  - Hannah Helgesen
  - Emanuel Sanchez Aimar
  - Bao-Long Tran
  - Ziliang Xiong
  - Johannes Hägerlind
  - Ioannis Athanasiadis
- Who supervises master students now?
- Who wants to take this course?



# Why this course?

- This course is meant to generate reflection and feedback on the supervision process.
  - for the supervisors (PhD students)
  - for the examiners (e.g. me, Maria, Mårten...)
  - for Master thesis coordinator (i.e. me)
  - for the director of study (i.e. Lasse).



# Course Format

- Examination in the form of a written report. Pass gives 3hp.
- Three seminars with active participation
- We will discuss contents today, and finalize desired contents for the report at the second seminar.
- During the third seminar we will discuss the reports.



# What is the supervisor role?

There are four people (or more) involved in an external masters thesis at ISY:

- The master student (or two students)
- The company supervisor
- The examiner
- The ISY supervisor

Who is responsible for what?



# Course schedule

- Second seminar in April (after students half-time meeting). Date: TBA [Doodle around April 9]
- Report should be handed in once the student has passed. e.g. sometime in August.
- If the student is delayed, you may also finalize and hand in the report in October (even though the student has not finished).
- Final seminar in October where reports are discussed.



# Frequently Asked Questions

Last time the course ran, the report content also had an item for a supervision FAQ

Let us look at the FAQ items I received from 2016...



# FAQ 1

When I started supervising Master's students I would have liked to know the answer to this question:

**Q1:** The student's writing style is poor. What do I do?

## **Answer**

If you understand what is being said, do not waste time marking all spelling errors. Point out spelling errors and suggest better technical terms if necessary.

As early as possible point the student to good spell-checkers and grammar correction tools (e.g. [grammarly.com](https://www.grammarly.com))

Do not try to make the text nicer for the student. What is important is the content of the work.



# FAQ 2

When I started supervising Master's students I would have liked to know the answer to this question:

**Q2:** What is the most important thing to look out for or keep track of?

## **Answer**

I think the most important thing is to have a regular "heartbeat" from the student to quickly recognize if something is going badly. If the thesis is done externally it is also, from experience, very important to make sure that the student is getting appropriate support from the company in the form of time and equipment.



# FAQ 3

When I started supervising Master's students I would have liked to know the answer to this question:

**Q3:** What do I do when my student does not listen to my advice, or does not understand the difference between advice and required changes?

## **Answer**

Probably the best method is to have an in-person meeting, where the important parts are strongly emphasized.



# FAQ 4

When I started supervising Master's students I would have liked to know the answer to this question:

**Q4:** How to explain what is expected in related work and background without giving explicit references and thus answers ?

## **Answer**

Point the student to an earlier masters thesis with a good related work section.

Use guiding questions which force the student to think more widely and abstractly while requiring answers which are effectively answered by references.



# Frequently Asked Questions

Last time the course ran, the report content also had an item for a supervision FAQ

Let us look at the FAQ items I received from 2022...



# FAQ 5

When I started supervising Master's students I would have liked to know the answer to this question:

**Q5:** The question of resources also seems to apply to master thesis projects after listening to stories from other supervisors who talk about the same problem. Who is responsible? I would suppose this is a moral dilemma within academia. The companies should provide the resources needed, but the aim is also to examine the students.

## **Answer**

You can 1) make the company ashamed of its incapability and 2) continue to point out its lack of commitment. Neither would help. We stepped in early from the academic side and provided the resources for the master thesis project, but we were just lucky to get a project proposal on Berzelius accepted. Motivated by the educational assignment assigned to the university, the supervisor can resolve the issue if they feel the responsibility to do so. This solution is my position on this matter but can, of course, change in the future.



# FAQ 6

When I started supervising Master's students I would have liked to know the answer to this question:

**Q6:** How many rounds of feedback are reasonable, and when should the students start writing?

## **Answer**

In general my experience has been that it is always good to be early with giving feedback, and working in increments. The risk is that the students otherwise produce a very large work with structural issues that are difficult to adjust and a few stressful weeks at the end with too much feedback. Hence having the students start writing from the very beginning and doing more but smaller feedback rounds is preferable to giving huge amounts of feedback at the end.



# FAQ 7

When I started supervising Master's students I would have liked to know the answer to this question:

**Q7:** How do you best spend your time to guide the student and the thesis in a good direction, while letting the student think and reason for themselves?

## **Answer**

The needs and wants of the students will vary from person to person but keeping a regular contact with the students and actively letting them discuss their ideas and plans could likely help them avoid pitfalls early on by pointing them out or perhaps giving alternative directions. Much time will be needed for the report but continuous feedback can often decrease the total amount of time necessary.



# FAQ 8

When I started supervising Master's students I would have liked to know the answer to this question:

**Q8:** What is the responsibility of the supervisor?

## **Answer**

The most basic stuff would be help the student with academic writing. Based on that, the student would sometimes have some questions about how to carry out the experiments. We should also help with that based on our knowledge. If the questions are beyond our capabilities, ask the examiner for some suggestions.



# Masters thesis supervision (3hp)

## Aims

The aims of this course is to make the course participants reflect on the masters thesis supervision process in order to make it more efficient. This will save future time and effort for all involved.

## Method

Each participant makes an activity log, and then writes a reflection report on the supervision process after the master student is finished. During the second seminar we will discuss how to write these reports. The reports are then discussed at a final seminar.

## Examination

Written report, active participation at seminars



# Masters thesis supervision (3hp)

## The suggested report contents

Things to reflect on include:

1. the student's plan, and feedback given on plan  
what was the purpose of the feedback? how did it work?
2. meetings with student
3. half-time checkup and feedback given
4. feedback given by supervisor on thesis
5. examiner's final feedback on thesis
6. the presentation seminar given by the student

For each of these consider: purpose of the activity? How effective was it? Possible improvements?

The reflection document shall be written according to a standard template (not finalized yet), and will be evaluated with pass or fail. Upon a fail one additional opportunity is given to update the document.



# 2016 Report content

1. Analysis and reflection on a number of **topics** (e.g. the thesis plan)
2. For each topic
  - a. Describe topic briefly, with emphasis on your participation
  - b. Estimate time spent
  - c. Describe what works well
  - d. Describe what is problematic, and why
3. We will discuss and finalize the report structure at seminar 2.