Universität Stuttgart

How to Find a Thesis?

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Agenda

- **Official rules**

- **Topic search**

- **Contact via e-mail**

- **Thesis in industry**

- **Tips and tricks**

- **Registration**

- **Potential problems during when working on a thesis**

- **Summary**

Official rules

- **Can be found in the examination regulations of your study program**

- **According to the examination regulations (PO)**

  - Only <u>professors</u> of the Computer Science Department (or staff members who have a special authorization) are allowed to hand out a thesis topic, i.e. to be the examiner

  - Bachelor thesis:
    - Students can start the thesis if they have at least 120 ECTS credits – is much too early to start a thesis as many contents are missing
    - Duration 6 months, value 12 ECTS

  - Master thesis
    - Students can start the thesis if they have at least 60 ECTS credits
    - Duration 6 months, value 30 ECTS

Topic search

- **When to start?**

  - 3-6 months prior to the planned starting date

- **How to search?**

  - Look at the Informatik-Marktplatz in ILIAS
    - 03 - Angebote für Abschlussarbeiten im Fachbereich Informatik
    - Typically <u>pre-defined topics</u> (including descriptions)

  - Contact institutes or departments via e-mail
    - Please do not sent mails to all members of an institute or department!
      → we will provide a list of contact persons (see thesis cheat sheet (to be prepared))
    - Ask several (not all!) departments in parallel for a topic
      → asking only your favorite department may delay your studies in case it does not work out
    - Often <u>on-demand</u> topics possible

  - (Look for topics at the institute web pages)
    - should not be required, since those topics should be available at the market place as well

Contact via e-mail (1/2)

- **How should I formulate my e-mail request to (hopefully) be successful?**

  - Personal details
    - Name
    - Study program
    - Number of semesters
    - Current number of credit points

  - Interests and qualifications
    - Which topics / courses do I / did I like?
    - What are you good at?
    - Which courses did you pass that may qualify you for a thesis at the respective institute?

  - Planned starting data of your thesis

  - Please note: The person who reads that e-mail possibly receives several requests per week and very often he/she may not know you personally. Thus you have to tell him/her everything that maybe helpful for the decision process

Contact via e-mail (2/2)

- **What if the contact person does not respond?**

  - Please wait for approximately 1 week (7 days)
  - Then you can send a friendly reminder
  - Actually we collect "Dos and Don'ts" for these contact persons – they should respond

- **What if you receive a rejection?**

  - You can ask whether it is worth waiting for a certain period of time and the ask again
  - Ask another institute

Thesis in industry (1/2)

- **Examiner**

  - The examiner who issues the topic has to be a <u>professor</u> of the CS Department (Slide 3) – companies cannot give out topics!

  - Contacting potential examiners early is mandatory
    → to discuss/adjust the topic, to involve the external supervisor, to clarify legal issues

  - Not all professors accept external theses – check the thesis cheat sheet (to be prepared) It may happen that a professor does not want to examine a specific external thesis
    → also look for alternatives at the university

- **Topic description**

  - Often the description of the topic is very generic (e.g. identify and improve best method)
    → neither the student nor the examiner knows exactly what to do

  - Sometimes thesis topics have very low scientific claims … the topic is useful for the company but scientifically not sufficiently demanding for the degree you want to obtain
    → students serve as cheap programmers

Thesis in industry (2/2)

- **External supervisor**

  - Often the external supervisor has not much experience in supervising a thesis
    → trial and error research during your thesis

- **Legal issues**

  - Copyright issues, confidentiality agreement, …

- **Positive side (if the previous points are addressed right from the beginning)**

  - Practical relevance, topics are related to current projects and products
  - One gets to know the company and vice versa, potential follow-up job offers

- **Another topic besides the things relevant for the university: payment**

  - Officially not allowed
  - If you have a contract, then it can happen that you have to do additional work besides your thesis – because you are paid …

Registration

- **Proceeding**

  - Computer-science specific contract

  - Registration form (includes the application for the degree certificate)
    – there the topic is mentioned

  - Register the thesis at the examination office:
    absolutely necessary during the first month after you received the topic
    – the date is mentioned on the registration form.

    A later registration will not be accepted and thus the thesis cannot be finished!

Tips and tricks (1/2)

- **Topic description**

  - Description should be sufficiently detailed so that at least in the first half of the thesis you should know exactly what you have to do (ask supervisor if he/she has follow-up ideas)

- **Doing a thesis = <u>guided</u> research**

  - Regular meetings are required as often problems are not fully solvable on your own!
  - Meetings are always valuable: if there are no problems, you report about your progress and discuss the next step(s). If problems arouse, you can discuss them to find solutions.

- **Write-up**

  - Start early with writing, ideally very early, e.g. during the implementation phase
  - Possibly start with foundations and literature as they do not change during your thesis
  - An early start allows you to identify LaTeX problems early and to find out how fast you can write up your thesis (writing 60 pages requires to 1 page per day for 2 months)
  - If you finish writing before the actual deadline, you may ask your supervisor to check the current draft of your thesis – valuable feedback can be incorporated

Tips and tricks (2/2)

- **Dedication and time management**

  - A thesis requires to work focused and hard for a certain period of time → highest priority

  - Good grades are not given for free: the whole range of grades is used

  - It is even possible to fail a thesis (this actually happens a few times per year)

  - Typical reasons:
    - write-up not submitted or not submitted in time
    - students "disappear": no meeting with their supervisor, not enough time for feedback on the write-up
    - a too late start of the write-up (incomplete, unclear, buggy write-up)

  - Recommendations to avoid problems:
    - work hard from the beginning
    - start to write up early
    - keep close contact to your supervisor

Potential problems when working on a thesis (1/2)

- **Topic problems**

  - What if you have registered the thesis and you then decide / realize that you cannot successfully finish that topic?

  - You can <u>return the topic</u> within
    - the first 2 months (BSc)
    - the first 3 months (MSc)

    and then look for a new topic.
    Please note that you can return a thesis topic <u>only once</u> in your study program!

- **Health problems**

  - What if you get ill?
  - Please visit a doctor and send the <u>medical certificate</u> to the examination board.
    Then the thesis will be prolonged by the time you had been ill.
  - Without a medical certificate no prolongation is possible!

Potential problems when working on a thesis (2/2)

- **Software / hardware problems**
  - What if problems occur with the code or the equipment your are required to work with?
  - Tell your supervisor. He / she will help you solving the problem.
  - Send a letter / e-mail to the examination board where the supervisor supports a prolongation by the time you could not work on the thesis due to this specific problem.

- **General rule**
  - If a delay occurs due to things you have an influence on, no extension will be granted.
  - Vacations, weekends or public holidays are no reason for an extension.

- **In case of any (further) questions:**
  - Check our web pages about theses
  - Ask the program manager
  - Ask the examination board

Summary

- **Finding a thesis**

  - Sufficient credit points needed to start a thesis
  - Look for a suitable thesis topic 3 to 6 months before the planned starting date
  - Check ILIAS market place and/or contact the institutes via their contact persons

- **Working on a thesis**

  - Work focused and hard from the beginning
  - Start to write up early, get feedback on the write-up
  - Keep close contact to your supervisor
  - If problems arise, let you supervisor know asap
  - You may prolong your thesis for external reasons
  - You may return the thesis topic once within the first few months

We wish you all the best with your thesis !!!

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Thank you for listening. Are there any question?