

# „How To Thesis“

Wednesday, 19.06.2024 17:45



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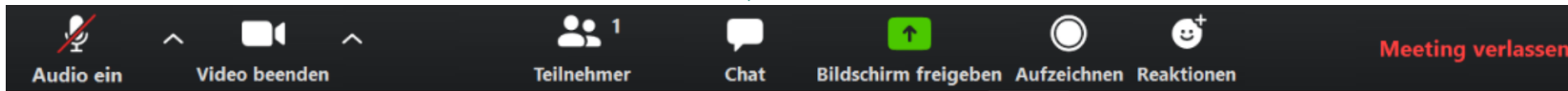
# Notice

- This event will be recorded
- The recording will be uploaded to Youtube
- You will find links in the video description
- Q&A at the end will **not be** recorded



# Moderation instructions

- Questions please only after the lecture
- Questions in ZOOM are also welcome in the chat.  
We will collect them and read them out/discuss them later



# We are:

## ■ **Dominic Brestel**

- Computer Science Master Student
- Mentor

## ■ **Ioana Gheta, Dr.-Ing.**

- Manager of the Informatics Study Program Services
- Course counselling, modularisation officer, support of the examination committees

# Topics

- Bachelor's thesis and Master's thesis – key data
- Best practices for theses
  - Search for a topic
  - Dealing with the supervisor
  - Thesis procedure
  - Preparation of the final presentation
  - Overcoming challenges
  - NO-GOs
- Q&A

# Mentimeter

Join at [menti.com](https://menti.com)  
Code 4714 0148



# BACHELOR AND MASTER THESIS

# **KEY DATA**

# Key data of Bachelor and Master thesis

## BACHELOR THESIS

- Requirement:
  - 120 ECTS passed
  - Maximum 1 compulsory module open
- Rating:
  - 15 ECTS (counts double for grade)
- Processing time:
  - 4 months
  - Extension: 1 month\*

## MASTER THESIS

- Requirement:
  - 60 ECTS passed
  - 15 ECTS from a specialization subject
- Rating:
  - 30 ECTS
- Processing time:
  - 6 months
  - Extension: 3 months\*

\*Apply for an extension no later than 2 weeks before the thesis deadline



# General information:



- Bachelor's thesis and Master's thesis also possible as group work
  - Contributions of those involved must be clearly defined!
- For parallel studies, an interdisciplinary thesis may be sufficient



- Final thesis also possible externally (e.g. FZI, etc. ...)
  - Consider the additional organizational effort!

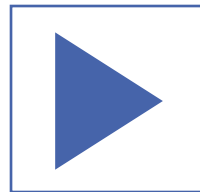
# General information:

- Withdrawing from the thesis is possible once (only in the 1st month)
  - Does not count as a lost attempt!
- A valid reason is always required for an extension of the processing time
  - Apply for an extension no later than 2 weeks before the thesis deadline
  - Must be approved!
- Thesis presentation should take place no more than 4 weeks after submission, preferably earlier

FROM PREPARATION TO PRESENTATION  
**BEST PRACTICES**

# Progression of a thesis

Find and apply  
for thesis



Kick-off  
presentation



Final month

First month

Intermediate  
month /  
Interim  
presentation

# Search for a topic

## Advertised thesis

- Advertised by institutes at KIT (websites are the most up-to-date)
- Often, exact topics can only be found in conversation
- A topic might sound very abstract before talking about it – don't get intimidated

## Initiative- applications

- Requests with own ideas are almost always possible
- The subject areas of the chairs can be found on the institute's website
- The scope of the work will then be determined in discussion

## External thesis

- Must be accompanied by an examiner within KIT
- Requirements of external parties and KIT must both be met
- IOSB (Fraunhofer) & FZI, for example, do not belong to KIT
- Communication between supervisors is very important

# Search for a topic (in the Master)



Internships and seminars provide good insights into institutes

Practice of Research [ Pdf ] brings experience for scientific work



HiWi jobs enable you to familiarize yourself with subject areas and get to know your potential team/supervisor



The variety of elective subjects offers a wide choice for specialization

# Search for a topic (in the Master)



## Attention:

For students who are pursuing a profile in the master, the master thesis must match this profile!



Master profiles in informatics  
(e.g. artificial intelligence)

9 profiles to choose from

Taking certain modules **and** master's thesis in this subject area

Certified specialization as  
*Computer Science M.Sc. with profile Artificial Intelligence*



Studies/final thesis with a [master profile](#) must be planned early!

# Working with supervisor

Contact person  
during the thesis

- Usually not the examining professor
- Supervisor but also involved in grading

Clarify the type of  
support:

- How familiar is the supervisor with the **topic** ?
- What **work rhythm does** the supervisor **expect** ?
- To what extent is the supervisor **able and willing to help** ?
- To what extent is the supervisor willing **to correct interim results** ?
- How difficult is it to contact the supervisor **quickly** ?



# Before the thesis:



## Identify the topic

- Scope must be appropriate
- Exact objectives and research question ( **exposé**, induction)
- Work environment & technology
- Has the department already produced work on a similar topic?



## Official registration

- After introduction phase
- Start date must be recorded
- Title must be determined at the time of registration (not too specific to avoid missing the topic!)



## Avoid misunderstandings!

- Often different expectations in advance
- Record the results of discussions
- In case of doubt / if several people are involved: send an email with protocol

# First month:



## Research and experimentation

- Write basics into the paper during research
- Always keep track of sources! It is best to use literature management software directly (Zotero)
- Find out if the topic suits you!

## Create time schedule with supervisor

Check expectations

If it turns out in the first month that you cannot cope with the topic at all:

- You can withdraw from the thesis once without losing your first attempt

Possibly kick-off presentation at the chair  
(often only in the Master's program)

# Intermediate months:



Productive,  
content-based  
work...  
...on  
implementation  
**and thesis**

- Continuously write your thesis, not everything at the end
- Keep track and document work
- Regular consultation with supervisor
- Write down decisions with reasons (at least bullet points for later formulation)
- Evaluation should be completed 3-4 weeks before submission

Interim  
presentation at  
the chair (often  
only in the  
Master's program)

- Dependent on the institute

Clarify problems **directly** with your supervisor !

# Last month:

## Writing, correcting and finalising the draft

- Formulating and improving the draft
- Finalize order/structure
- Include images in the latest version (PDF or SVG)
- Standardize terminology
- Check sources

## Supervisor needs time to read through (intermediate) results

- Always plan time for feedback

## Formulate the introduction, summary and outlook last

- Are very important (first impression on examiner )
- Reflect the rest of the work



Check with your supervisor if a pdf is enough or a printed thesis is expected

# The final presentation:



## Ask about general conditions:

- Online / face-to-face (sometimes both)
- Who is listening (usually the working group / the institute)
- Time frame (Bachelor 20 minutes, Master 30 minutes)



## Set priorities

- Present 1 or 2 interesting points of the work as clearly as possible
- "Preparation" and "Outlook" are also important



## Prepare for the questions section

- Don't panic!
- Consider placing the topic in context
- Content Questions are often superficial



## Rehearse presentation!

- e.g. with supervisor or fellow students (also with questions)
- Rehearse with different audiences

# Challenges

## External factors:

- Software unsuitable
- Defects in the material used


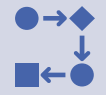




## Internal factors:

- Psychological stress, illness, writer's block

## Desired result seems unattainable ?

- In research, failures are normal and important
- If the work does not produce the desired result, you can still write a scientific paper about it
- If there are problems at the beginning of the thesis: **reorientation of content?**
- **Extension** might be sufficient ?

# Dealing with writing problems

-  Thesis should always be a priority      But what if things just don't move forward?
-  “Just One Thing” method:      Select individual tasks and complete them step by step
-  Fixed working hours:      For example, always write from 9 a.m. to 3 p.m.,  
→ but take the weekend off
-  Intentionally writing in non-final form:      On paper, schemes, bullet points  
→ Only formulate later
-  Avoid hurdles of getting started:      Plan chapters/sections early  
→ Makes it easier to start new sections
-  Take a writing course at [HoC](#)

# No – Go`s

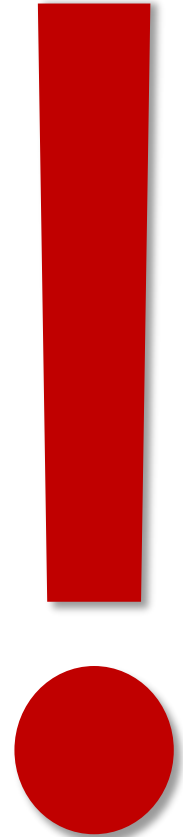
Large discrepancies between one's own ideas and the wishes and expectations of the supervisor

Difficulty differentiating sub-problems of the overarching topic

Code not/poorly documented

Writing half of the work three days before the deadline

When submitting the paper don't forget to print, bind and sign it





# After a bachelor thesis



## Apply for the master **on time**

Application deadline for the winter semester : **15.07.**  
Application deadline for the summer semester : **15.01.**



For the Master's application, all **examinations must** be completed before the end of the semester (submission & final presentation):

Deadline in summer semester : **30.09.**  
Deadline in winter semester : **31.03.**  
If necessary, request a 4.0 certificate



Submission is shortly after the start of the semester?

Student can transfer up to 30 ects of courses to the master from their bachelor study

# After a master's thesis



Officially complete  
the degree

Don't forget to withdraw  
(Exmatrikulieren)  
Download title certificate  
Collect final documents



Pursuing a [doctorate](#)



Career entry

Job search, for example,  
via the [CareerService](#)

# Q&A-PANEL

# THANKS FOR YOUR ATTENTION!

# Ressourcen

## ■ Bachelor of Science

- Bachelorarbeit (generell): [https://www.informatik.kit.edu/faq-wiki/doku.php?id=bachelorarbeit\\_allg](https://www.informatik.kit.edu/faq-wiki/doku.php?id=bachelorarbeit_allg)
- Bachelorarbeit (extern): [https://www.informatik.kit.edu/faq-wiki/doku.php?id=bachelorarbeit\\_ext](https://www.informatik.kit.edu/faq-wiki/doku.php?id=bachelorarbeit_ext)
- Mastermodule im Bachelorstudium: [https://www.informatik.kit.edu/faq-wiki/doku.php?id=mastermodule\\_im\\_ba](https://www.informatik.kit.edu/faq-wiki/doku.php?id=mastermodule_im_ba)
- Interner Übergang vom Bachelor- zum Masterstudium am KIT: [https://www.informatik.kit.edu/faq-wiki/doku.php?id=interner\\_uebergang\\_ba\\_ma](https://www.informatik.kit.edu/faq-wiki/doku.php?id=interner_uebergang_ba_ma)
- Auflage zur Zulassung zum Masterstudiengang Informatik (INFO): [https://www.informatik.kit.edu/faq-wiki/doku.php?id=auflage\\_master](https://www.informatik.kit.edu/faq-wiki/doku.php?id=auflage_master)

## ■ Master of Science

- Master Informatik: <https://www.informatik.kit.edu/10862.php>
- Studienprofile im Master Informatik: <https://www.informatik.kit.edu/9378.php>
- Masterarbeit (generell): [https://www.informatik.kit.edu/faq-wiki/doku.php?id=masterarbeit\\_allg](https://www.informatik.kit.edu/faq-wiki/doku.php?id=masterarbeit_allg)
- Masterarbeit (extern): [https://www.informatik.kit.edu/faq-wiki/doku.php?id=masterarbeit\\_ext](https://www.informatik.kit.edu/faq-wiki/doku.php?id=masterarbeit_ext)

- Abschlussarbeit (Lehramtsstudierende): [https://www.informatik.kit.edu/faq-wiki/doku.php?id=abschlussarbeiten\\_lehramstudierende](https://www.informatik.kit.edu/faq-wiki/doku.php?id=abschlussarbeiten_lehramstudierende)

# Weitere Ressourcen

- Externe Abschlussarbeiten: [https://www.haa.kit.edu/downloads/KIT\\_ALLGEMEIN\\_Merkblatt\\_Externe\\_Abschlussarbeiten.pdf](https://www.haa.kit.edu/downloads/KIT_ALLGEMEIN_Merkblatt_Externe_Abschlussarbeiten.pdf)
- Parallelstudium: <https://www.informatik.kit.edu/faq-wiki/doku.php?id=parallelstudium>
- HoC - SchreibLabor: <https://studium.hoc.kit.edu/hocampus/index.php/lehre/wissenschaftliches-schreiben/>
- HoC - Schreibberatung: <https://studium.hoc.kit.edu/hocampus/index.php/beratung/schreibberatung/>
- KIT-Fristen: <https://www.sle.kit.edu/imstudium/termine-fristen.php>
- Abschlussdokumente: <https://www.sle.kit.edu/imstudium/abschlussdokumente.php>
- Titelführungsbescheinigung: <https://www.informatik.kit.edu/faq-wiki/doku.php?id=titelf>
- Promotion- Karlsruhe House of Young Scientists (KHYS): <https://www.khys.kit.edu/promovieren-am-kit.php>
- Berufseinstieg: <https://www.careerserviceportal.kit.edu/de/>