







## Media Informatics Master

# Welcome!

Prof. Dr. Antonio Krüger Dr. Michael Schmitz Dr. Pascal Lessel

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## Introduction



Prof. Dr. Antonio Krüger



Dr. Michael Schmitz



Dr. Pascal Lessel

Chairman of the examination board of Media Informatics (MI)

Contact person for questions related to the "Hochschule der Bildenden Künste Saar" (Academy of Fine Arts - HBKsaar) Contact person for the MI internship and other questions

## Agenda

General Information

Internship (2<sup>nd</sup> Semester)

Thesis (4<sup>th</sup> Semester)

HBKsaar Details

## Agenda

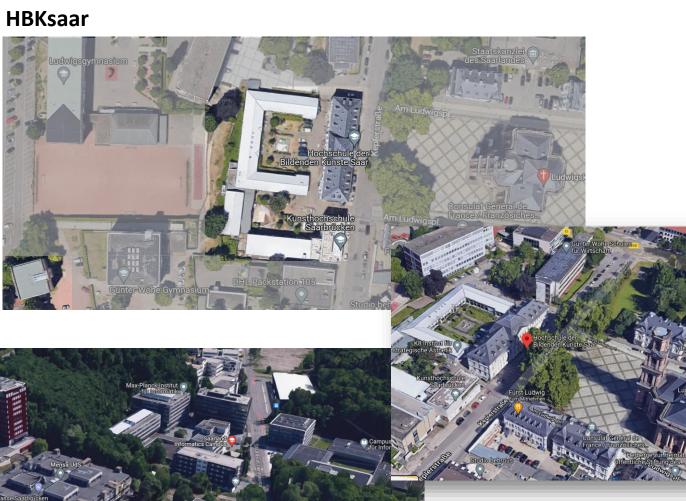
General Information

Internship <sup>'2nd</sup> Semester)

Thesis (4<sup>th</sup> Semester) HBKsaar Details

## **Relevant Locations**

### **Saarland Informatics Campus**



## **Important Contacts**





Examination office <a href="mei@ps-mint.uni-saarland.de">mei@ps-mint.uni-saarland.de</a>

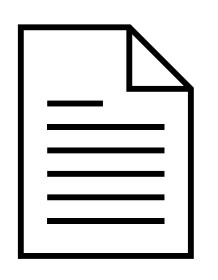
Study coordination (Dr. Rahel Stoike-Sy or Barbara Schulz-Brünken) studium@cs.uni-saarland.de

First contact when you have questions regarding study documents, study organization and progress, examination related general questions, academic and personal problems, etc.

## **Important Documents**

## **Study Regulations ● Examination Regulations ● Course Handbook**

If you have a question, there is a high chance that it is answered in these documents









DE: <a href="https://www.ps-mint.uni-saarland.de/de/programmes/mei">https://www.ps-mint.uni-saarland.de/de/programmes/mei</a>

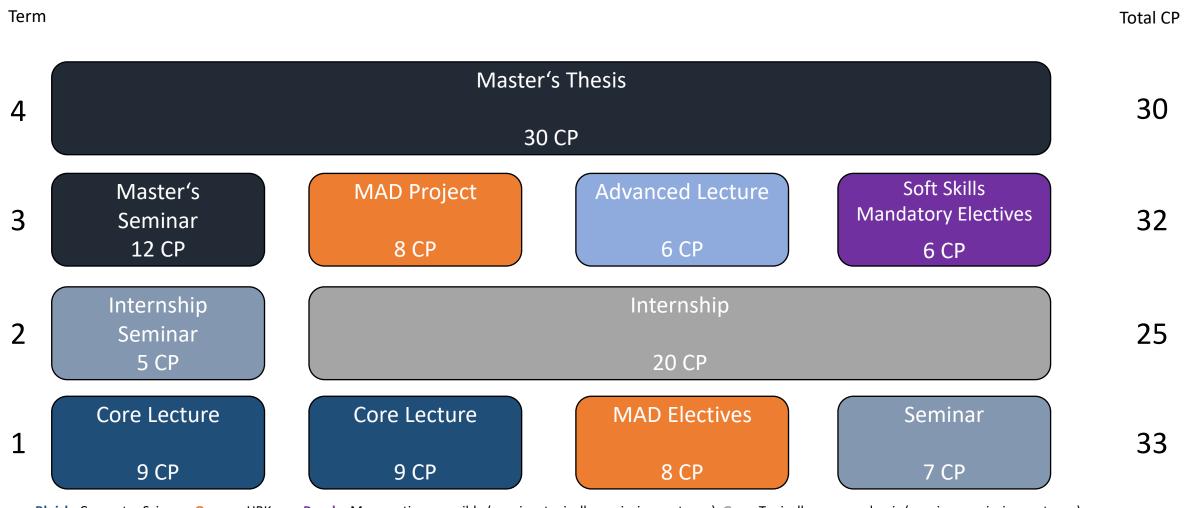
### **Overview Document**

We (sek-ak@dfki.de) provided you with an overview document with several useful links and pieces of information along with the invitation to this kickoff meeting.

If you missed it (e.g., you heard from this kickoff meeting only from another person), please write an email to <a href="mailto:pascal.lessel@dfki.de">pascal.lessel@dfki.de</a>

## Example Study Plan

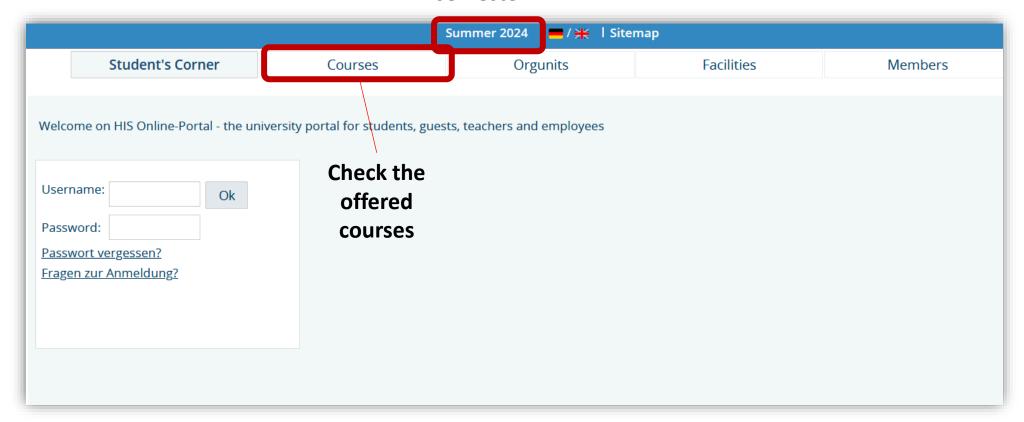
# Consult your study regulations and module descriptions for more details

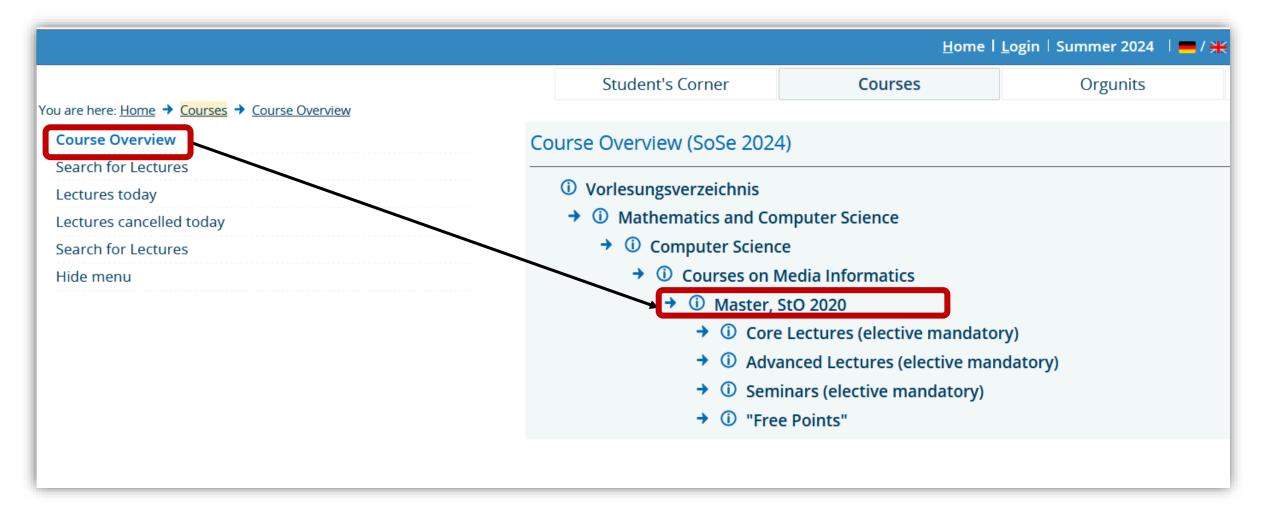


Bluish: Computer Science; Orange: HBKsaar, Purple: Many options possible (requires typically a-priori acceptance); Grey: Typically, non-academic (requires a-priori acceptance)



# Select a semester



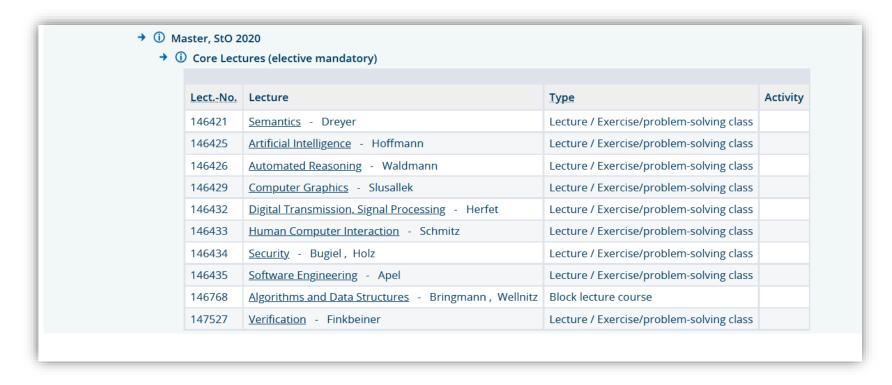


#### **Example: Core Lectures – This semester:**

- → ① Computer Science
  - → ① Courses on Media Informatics
    - → ① Master, StO 2020
      - → ① Core Lectures (elective mandatory)

LectNo.	Lecture	Туре	Activity
149194	<u>Discrete Optimization (before Optimization)</u> - Karrenbauer	Lecture / Exercise/problem-solving class	
149195	<u>Complexity Theory</u> - Bläser	Lecture / Exercise/problem-solving class	
149466	<u>Cryptography</u> - Joux, Hanzlik	Lecture / Exercise/problem-solving class	
149467	Introduction to Computational Logic - Smolka	Lecture / Exercise/problem-solving class	
149471	<u>Data Networks</u> - Feldmann	Lecture / Exercise/problem-solving class	
149472	Machine Learning - Valera Martinez	Lecture / Exercise/problem-solving class	
149474	Operating Systems - Kaufmann, PhD	Lecture / Exercise/problem-solving class	
151053	Continuous Optimization (Kontinuierliche Optimierung) - Ochs , Mitarbeiter des Lehrstuhls	Lecture / Exercise/problem-solving class	
151058	Convex Analysis and Optimization - Ochs , Mitarbeiter des Lehrstuhls	Lecture / Exercise/problem-solving class	
151106	<u>Image Processing and Computer Vision</u> - Weickert , Mitarbeiter des Lehrstuhls	Lecture / Exercise/problem-solving class	

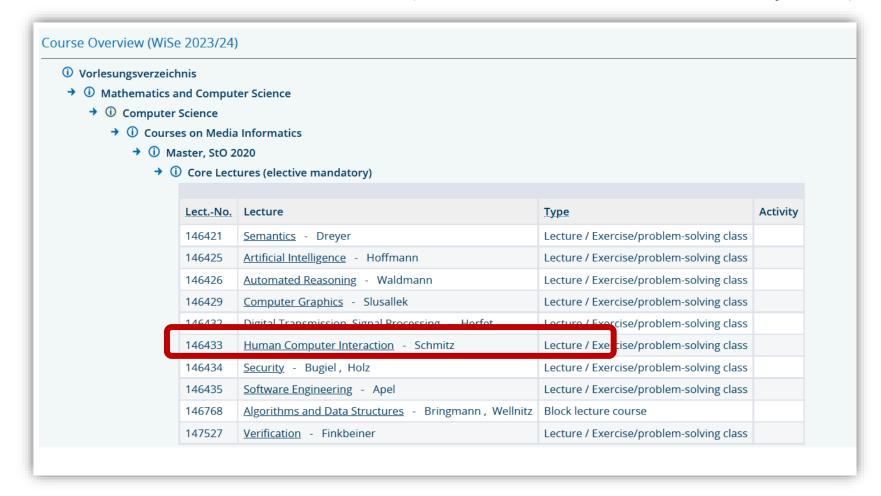
#### **Example: Core Lectures – Last semester:**

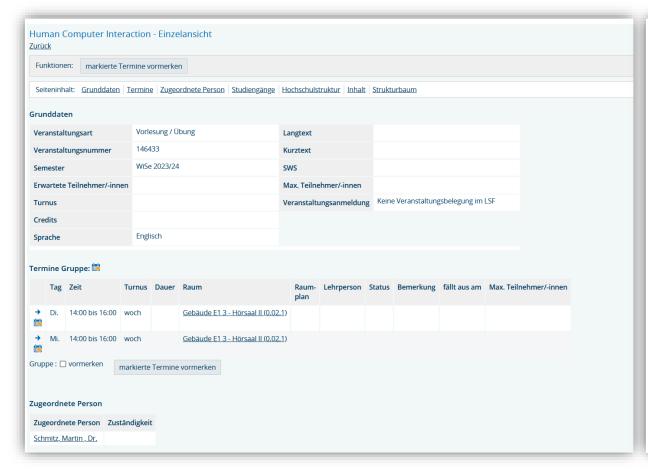


A lot of options are offered every year! Often core lectures are repeated in the same rotation (i.e., in summer terms).

Attention: Advanced lectures and seminars are often only offered once.

How do I receive more information on a course? (i.e., lecture slots or how much ETCS points?)





Studiengänge							
Abschluss	Studiengang	Semester	Prüfungsversion	Kommentar	LP	ВР	ECTS
LA Sekundarstufe I und II	<u>Informatik</u>	-	20221		9		9
LA beruf.Schulen	<u>Informatik</u>	-	20221		9		9
Bachelor (KB)	Mathematik und Informatik	-	20201		9		9
Master (KB)	<u>Cybersecurity</u>	-	20211		9		9
Bachelor (KB)	Computer Science (engl.)	-	20211		9		9
Master (KB)	Data Science and Al	-	20191		9		9
Master (KB)	Embedded Systems	-	20161		9		9
LA Sekundarstufe I und II	<u>Informatik</u>	-	20121		9		9
Master (KB)	<u>Medieninformatik</u>	-	20131		9		9
Bachelor (KB)	<u>Medieninformatik</u>	-	20131		9		9
Bachelor (KB)	<u>Informatik</u>	-	20151		9		9
Master (KB)	<u>Informatik</u>	-	20151		9		9
Bachelor (KB)	Mathematik und Informatik	-	20161		9		9
Master (KB)	Mathematik und Informatik	-	20161		9		9
Master (KB)	Entrep. Cybersecurity	-	20181		9		9
Bachelor (KB)	<u>Informatik</u>	-	20201		9		9
LA Sekundarstufe I und II	<u>Informatik</u>	-	20201		9		9
Bachelor (KB)	<u>Medieninformatik</u>	-	20201		9		9
Master (KB)	Medieninformatik	-	20201		9		9

## **CS Internal Systems**

https://seminars.cs.uni-saarland.de



#### https://cms.sic.saarland



SIC Seminars		
SIC Saarland Informatics Campus	Seminar Assignment	
Summer Term 2023		
Proseminar Assignment Summer 2023		
Seminar Assignment Summer 2023		
Winter Term 2022		
Seminar Assignment for Winter 2022/2023		
Proseminar Assignment for Winter 2022/2023		
Summer Term 2022		
Seminar Assignment Summer 2022		
Proseminar Assignment Summer 2022		
Winter Term 2021		
Seminar Assignment Winter 2021/2022		
Proseminar Assignment Winter 2021/2022		

CMS
Vorlesungen

Sommersemester 2023

Computability in Mathematics Leon Pernak, Emmanuel Rauzy
Dynamical Systems Dan J. Hill
Formalizing mathematics in LEAN Laurent Bartholdi
Hands on Networking (Block Course February / March 2023) Thorsten Herfet
High Dimensional Analysis: Random Matrices and Machine Prof. Dr. Roland Speicher
Learning
Hot topics in long-read sequencing Andre Holzer
Interactive Systems Prof. Dr. Antonio Krüger
Introduction to Computational Logic Prof. Gert Smolka
Introduction to Mathematical Logic Federik Herzberg
Life Insurance Mathematics Frederik Herzberg
Life Insurance Mathematics Frederik Herzberg
Machine Learning Prof. Dr. Isabel Valera

Internal seminar registration
Constraint solving to assign
seminar spots

Management system for courses

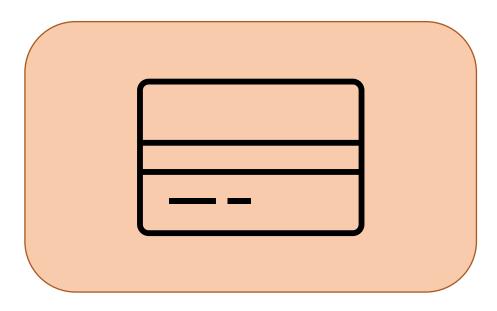
Many, but not all CS courses

use this

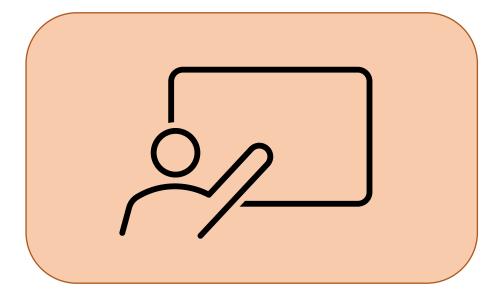
## Agenda

General Information Internship (2<sup>nd</sup> Semester)

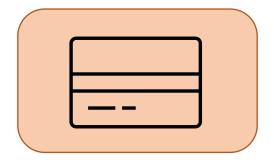
Thesis (4<sup>th</sup> Semester) HBKsaar Details

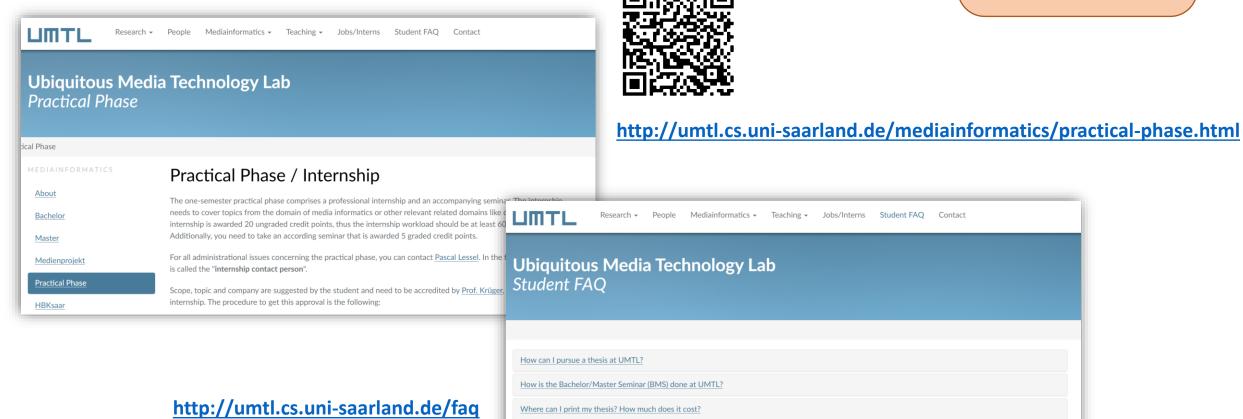


Internship in an external company for (at least) 600 working hours in total



Attend 3 internship talks & give a talk about your internship

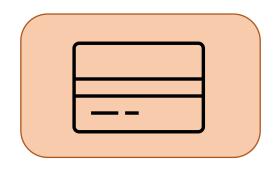




Where do I find information about the practical phase?

Does the internship needs to be approved beforehand?

Could the internship take longer than required?



Some companies that already accepted students in the past:

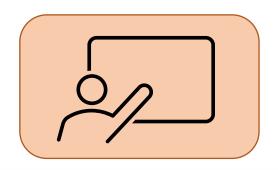
- anynines GmbH (formerly Avarteq GmbH)
- AZURY
- Centigrade
- Create 3D
- Deutsche Hochschule für Prävention und Gesundheitsmanagement (DHfPG)
- Dialogika
- Didactic Innovations GmbH
- Ergosign
- Eyeled
- Fjutscha
- IMC
- KiM
- SAP (St. Ingbert)
- site point

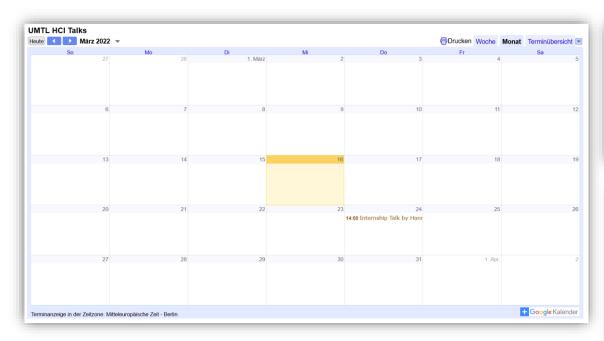
It's your responsibility to find an internship.

You do <u>not</u> need to do the internship in Saarland.

A possible internship needs to be approved by us beforehand.

The internship needs to cover topics from the domain of media informatics.





https://umtl.cs.uni-saarland.de/research/talks.html



#### Seminar

To pass the seminar accompanying the practical phase, there are the following requirements:

- 1. Attending at least 3 other seminar talks
- 2. Giving a 30 minute presentation about the internship. This presentation should introduce the company, as well as the work you have done. The presentation is supposed to close with a short summary and what you liked about the internship and what not.

To choose a timeslot for your presentation, please contact the internship contact person with 5 suggestions of possible dates (including your available time on these days) and the following information:

**Title**: [Add the title of the talk] **Type of Talk**: Internship-Talk

Internship-Company: [Add the name of the company where you did your internship]

Speaker: [Add your name]

Time and date: [Add the time and date]

Teams-Link: [Add the link]

**Abstract**: [Provide a short abstract of the talk]

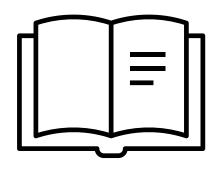
Digital meetings!

After the date is aggreed upon, you will receive the Teams link and the talk will be added to the calender (see below).

## Agenda

General Information Internship <sup>'2nd</sup> Semester) Thesis (4<sup>th</sup> Semester)

HBKsaar Details

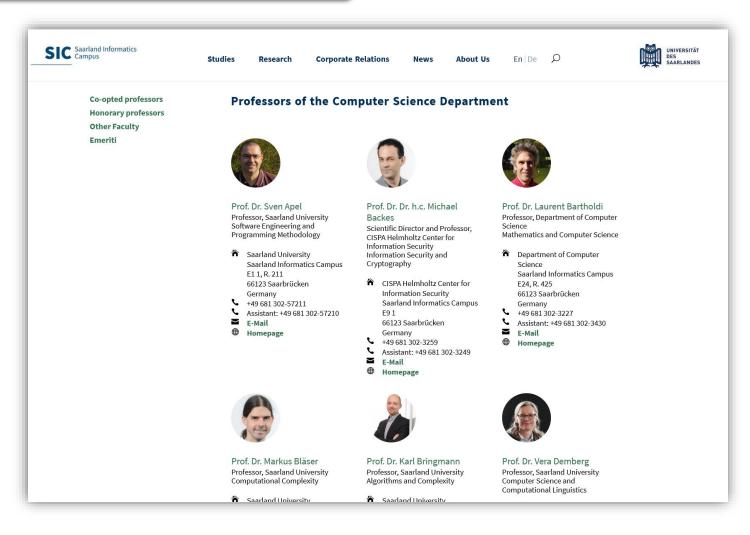


## Two general options:

- A) Writing your thesis internally at Saarland University.
  - This can be typically done at all Computer Science chairs.

    Therefore it is reasonable to start finding suitable chairs early and attending their courses.
  - Different requirements!
    Check them out before contacting the corresponding chair/responsible person.

- B) Writing your thesis in an external company.
  - You also need to find a Professor of Computer Science at Saarland University who agrees to co-supervise.



Link to their chair pages

→ Presentation of research interests



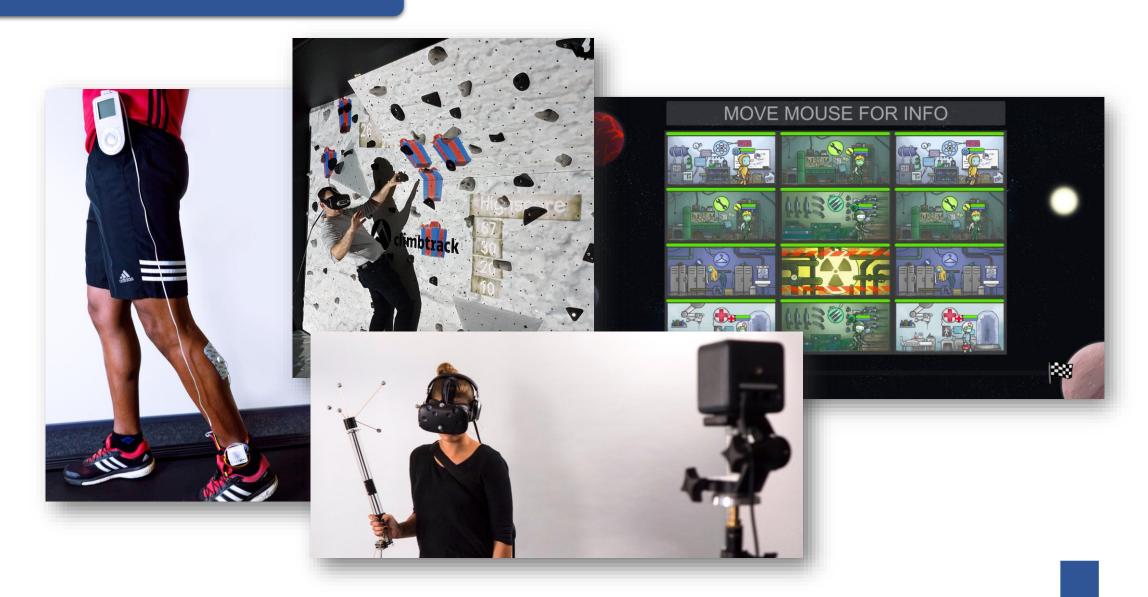
#### **Example: UMTL Chair**

```
Stereoscopic Interactive Surfaces
                                     Mild Cognitive Impairment
                                                            Autonomous Systems
                                                                                 Redirection Techniques
  Input and output for small devices
                                         Cross Plattform Applications Context Aware User Interfaces Attention Guidance
        Predicting Privacy Settings
                                        Educational Technologies Privacy User Interfaces Context Recognition
     Training Assistance
                 Wrist-worn devices
                                             Visual attention-directing systems Ambient Notifications
       Clinical Psychology Human Factors
                                                             Usable Security Wearables
                                          3D Interaction
                                                                                           Mobile App Permissions
     Haptic Feedback
                    Behavior Change Support Systems
                                                             Crowdsourcing
                                                                                  Gestural Interaction
       Social Networks
                        Applied Machine Learning Sports Technologies Same-Side Interaction
     Alzheimer's Disease Mobile HCI Multi-modal Interaction Games Smartwatches Activity Recognition
          Persuasive Technology

Computer Vision Human Computer Interaction GPGPU

Neural Engineering
   Measuring Cognitive Load
                           Augmented Reality Mixed reality Mobile Eye Tracking Continuous Learning
        Multitouch Interaction
      Cognitive Psychology Ubiquitous Computing Virtual Reality Activity Sensing
Computer Aided Diagnostics Eye Tracking Gamification Mobile Interestion 3D User Interfaces Internet of Things
             Optimization
                                        User Modeling
                                                            Personalization of Gamified Systems
              Older Adults Compilers
                                  Translation Environments Haptic Interaction in Virtual Environments
           Gaze-based Interaction
           Particle Simulations Fabrication Computational Linguistics Interactive Systems in Sports
             Brain Computer Interfaces Code Generation Progressive Web Applications Security & Privacy by Design
 Interactive Machine Learning Reinforcement Learning
                                              Interactive Assistance Systems
                                                                             Prototyping of Interactive Systems and Devices
```

## **Example: UMTL Chair**



#### **Example: UMTL Chair**

#### Bachelor/Master Thesis

#### How can I pursue a thesis at UMTL?

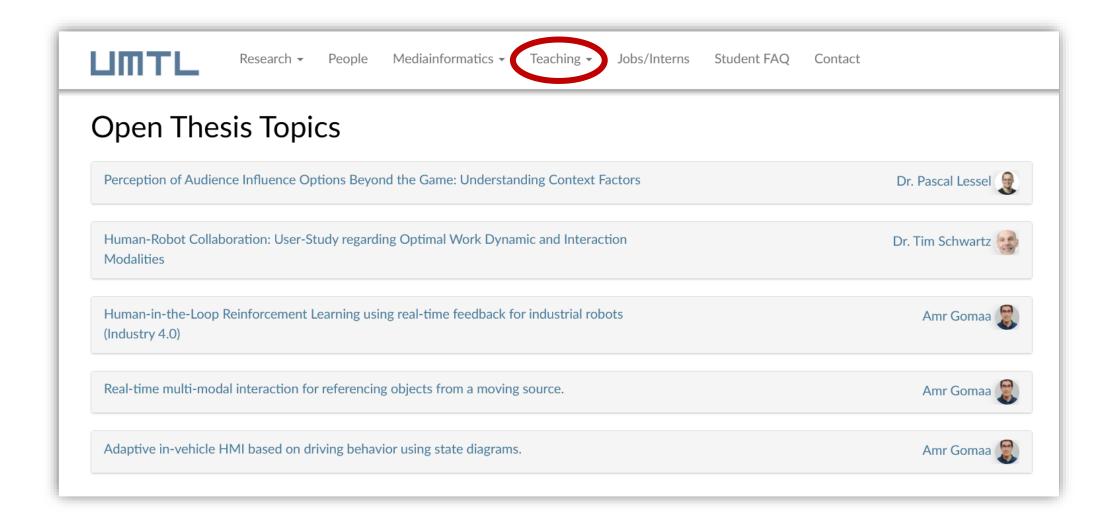
If you are interested in writing a Bachelor's or Master's thesis at our chair, please be aware of the following prerequisites and principles:

- 1. Optimally, you have successfully attended lectures and/or seminars given by our group (Bachelor or Master).
- 2. To find an advisor and apply for a topic, there are two options:
  - a. You are looking for a topic: Have a look at our open thesis page. Here you can see what we currently offer every entry illustrates how to apply for it. If you have experience in an area that we cover (please visit the individual web pages of our team members), but no corresponding open topics are available at the moment, you can proactively contact the corresponding member of UMTL. Add your current transcript of records (as well as former ones, if applicable), a motivational statement why the area is a good fit for you and a clear timeframe indicating when you plan to do your thesis (planned start + end date). Please note that there is no guarantee that we can supervise you.
  - b. You already have a topic (your own idea or the topic is proposed by an external company): In order to learn more about our research interests, please visit the individual web pages of our <u>team members</u>. Please send <u>Prof. Krüger</u> an email with the names of the team members that match the topic of your intended thesis closest (if you cannot identify a match, we are likely the wrong chair for supervision).

    Please note, if the thesis does not fit to our research agenda or the relevant members have no capacity left, we might not be able to supervise you on this topic (however other Computer Science chairs might be able to, see below). If the topic comes from an external company, please include the original thesis description in your initial contact and also state whether there are aspects the company needs us to consider (e.g., "Sperrvermerk"/NDAs etc.). If the topic is a fit and a member is interested, Prof. Krüger will initiate the contact.
- 3. The potential advisor will review your application:
  - You get a positive reply: Great news! You can now proceed with the topic and follow the steps stated in the section "After I have a topic and an advisor what else do I need?" (if it is an external thesis, see also the common questions section)
  - You receive a negative reply: Sadly, the team member cannot accept your application. This could be because of different reasons, such as the lack of

## **Our Thesis Process**

#### **Example: UMTL Chair**





Questions so far?

## Agenda

General Information Internship 2<sup>nd</sup> Semester

Thesis (4<sup>th</sup> Semester) HBKsaar Details









Note: What is shown was for illustrative purposes. Binding are always study program documents etc. and not these slides.