Current Topics in Media Computing and HCI

Prof. Dr. Jan Borchers

Media Computing Group
RWTH Aachen University

Summer Term 2019

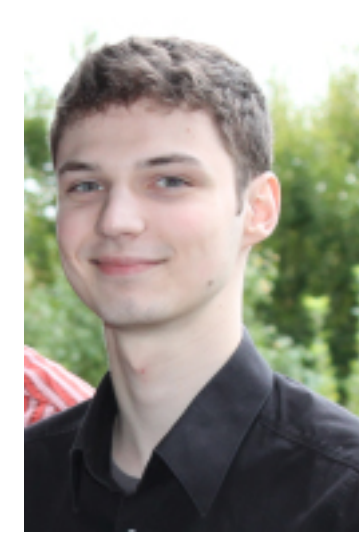https://hci.rwth-aachen.de/cthci

Team

Lecturer

Prof. Dr. Jan Borchers
borchers@cs.rwth-aachen.de

Assistants

Marcel Lahaye
lahaye@cs.rwth-aachen.de

Oliver Nowak
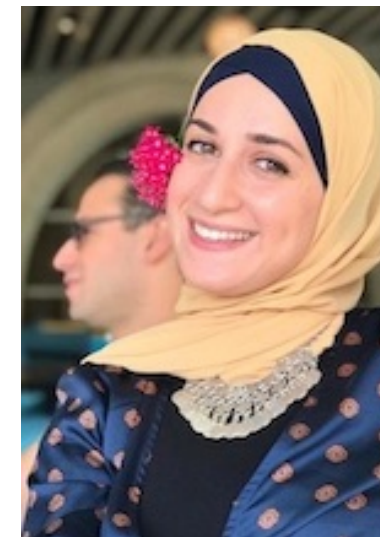nowak@cs.rwth-aachen.de

Guest Assistants

Sebastian
Hueber

Adrian
Wagner

Krishna
Subramanian

Nur
Hamdan

Christian
Corsten

Philipp
Wacker

Anke
Brocker

Goals

- Understand **types of research and methods in HCI**

- Practice how to **retrieve** and **evaluate** information from the literature
  ⇒ Preparation for thesis and future (research) work

- Learn about **up-to-date developments** in Human–Computer Interaction and interactive multimedia from new books and **recent conference/journal articles**

- Meet PhD students at the lab and learn about their research areas to find a favorite topic and advisor for your thesis

Who Are You?

- Audience

  - M.Sc. Computer Science

  - M.Sc. Media Informatics

  - M.Sc. Software Systems Engineering

  - B.Sc. Computer Science (extra credit / carry-over)

  - B.Sc. / M.Sc. Technical Communication (with focus on CS/HCI research)

- Prerequisite: DIS 1

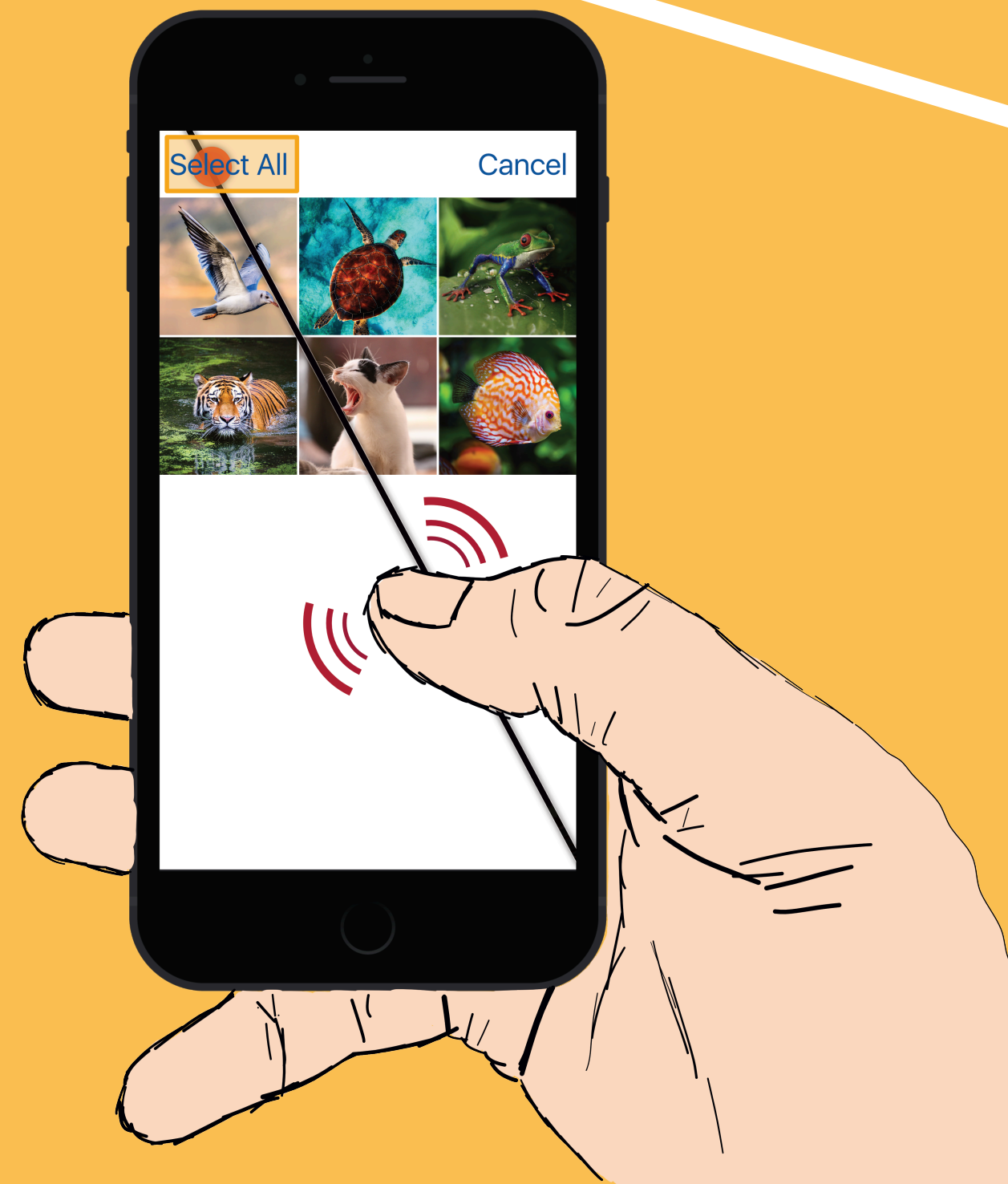 - In our studios, assignments, and exams we assume that you know DIS I

Administrative

- Format: 6 ECTS

- Studio: Tuesdays, 10:30–12:00

- Lab: Wednesdays, 12:30–14:00
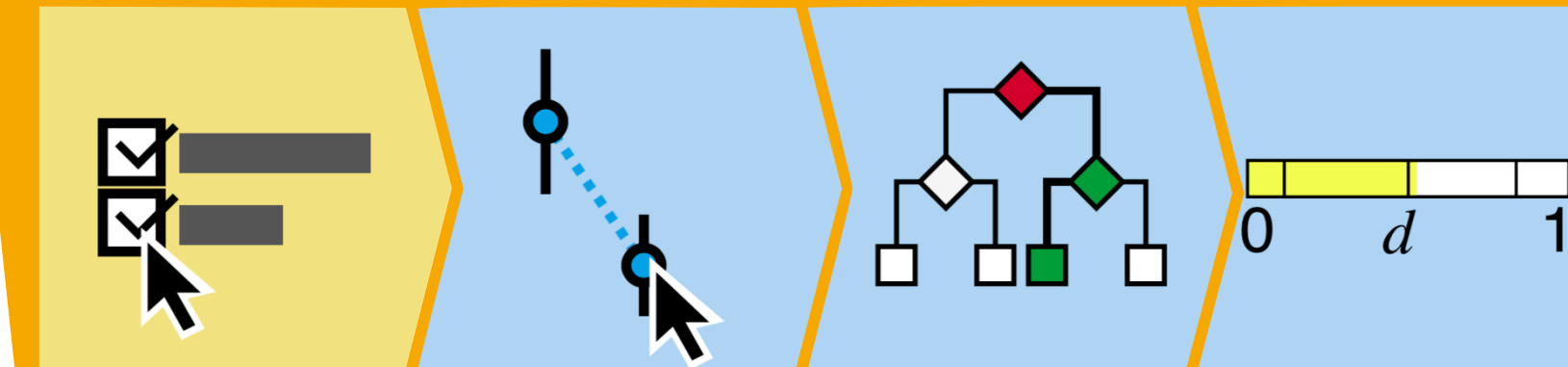

- Expect to spend around 9h/week
  in total on this class

Adrian Wagner:
Input Devices for Games

Christian Corsten:
Force Input on Handheld Devices

Statsplorer

Krishna Subramanian:
Supporting Exploratory Programming Workflows

Villar et al., Project Zanzibar, CHI18

RWTH AACHEN UNIVERSITY

Sebastian Hueber:
Experience with VR

Philipp Wacker:
AR and Immersive Sketching
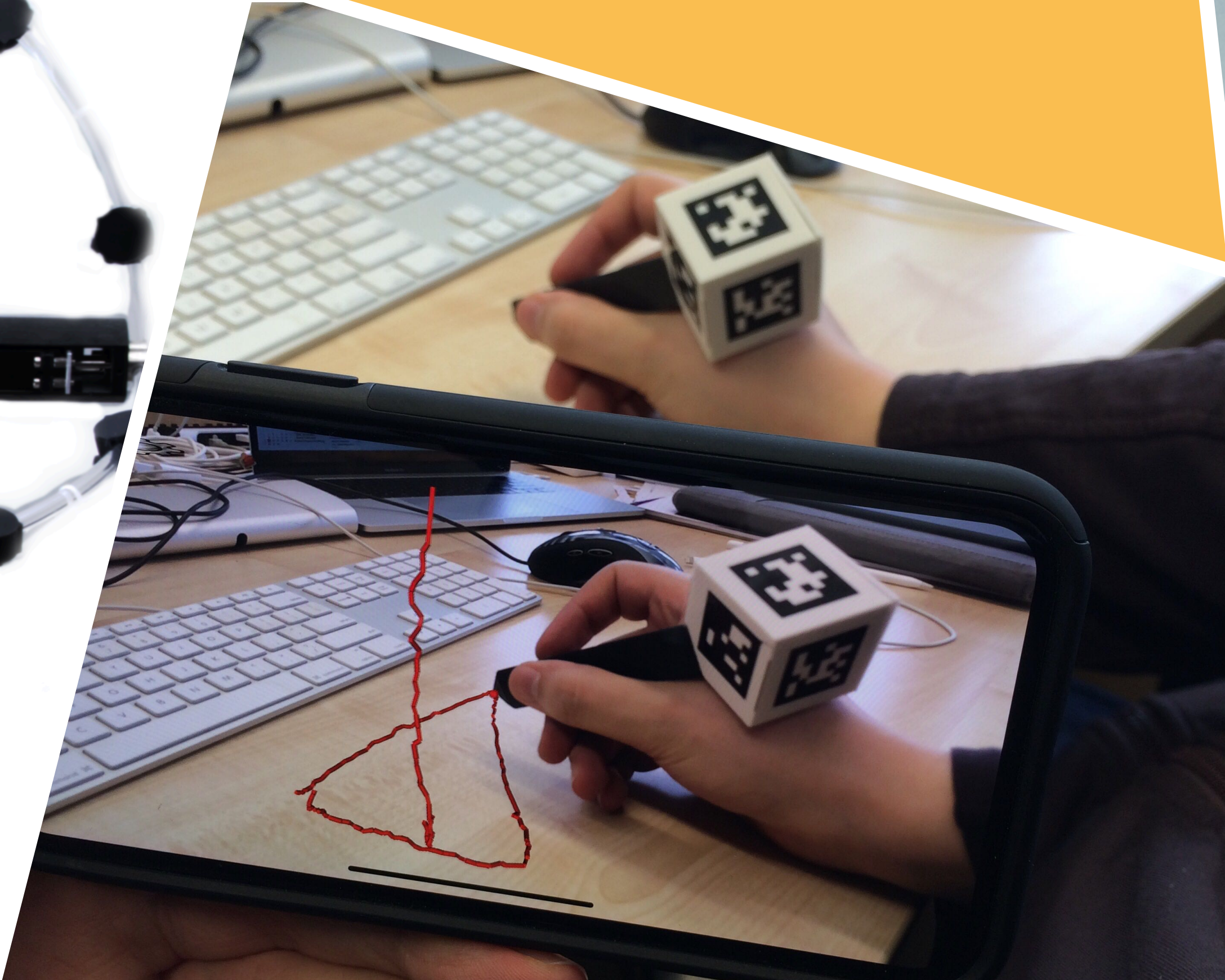
Nur Hamdan:
Smart Fabrics

Rietzler et al., VaiR, CHI17

RWTHAACHEN UNIVERSITY

Marcel Lahaye:
Personal Fabrication

Anke Brocker:
Soft Robotics & Jewellery

Oliver Nowak:
Tangible on Tabletops

Weichel et al., ReForm, UIST15
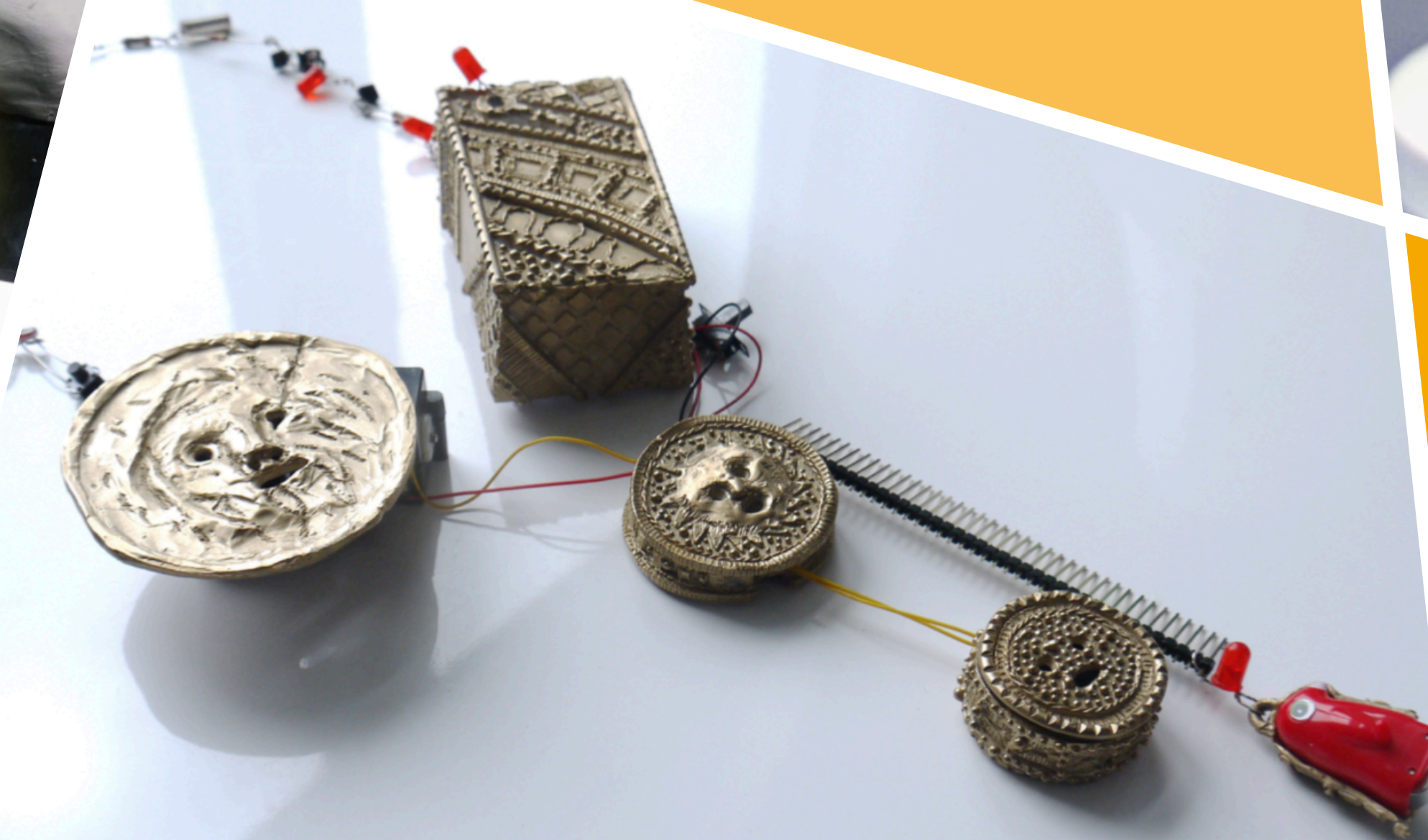
Alexandra Ju, Functionality in Wearable Tech, TEI16

RWTH AACHEN UNIVERSITY

Course Structure

Flipped Classroom

Videos: How does research in HCI work?
- Research Contributions
- Research Approaches
- Scientific Publishing
- Statistics in HCI

Studios (Tuesday):
- Discussion of lecture and assignment content
- Time and space for your assignments

Workshop (Wednesday):
- Work in groups at a given topic

Apr 3rd – May 14th

Midterm

May 21st

Frontal Lecture

Studios: Current Topics in HCI (Tuesday)
- Presentations by i10 assistants
- *Guest lecture by Oliver Stickel:* CSCW

Mini HCI Project: (Wednesday)
- Write your own research paper!

May 28th – Jul 10th

Final Exam

Jul 24th

Final Exam

Aug 14th
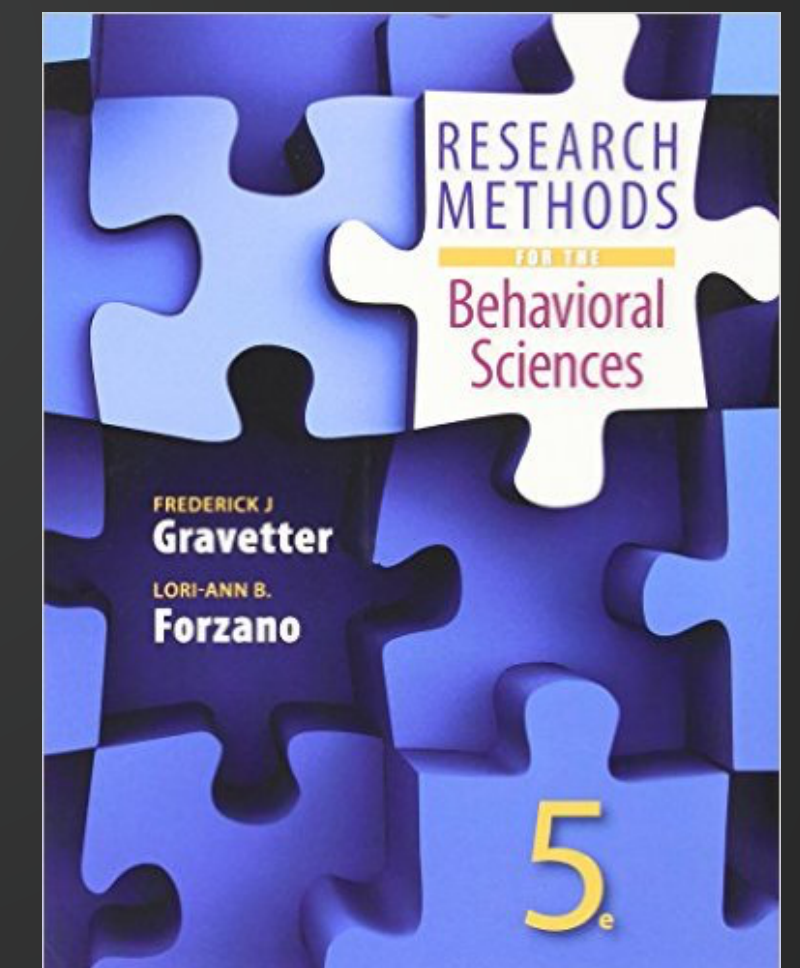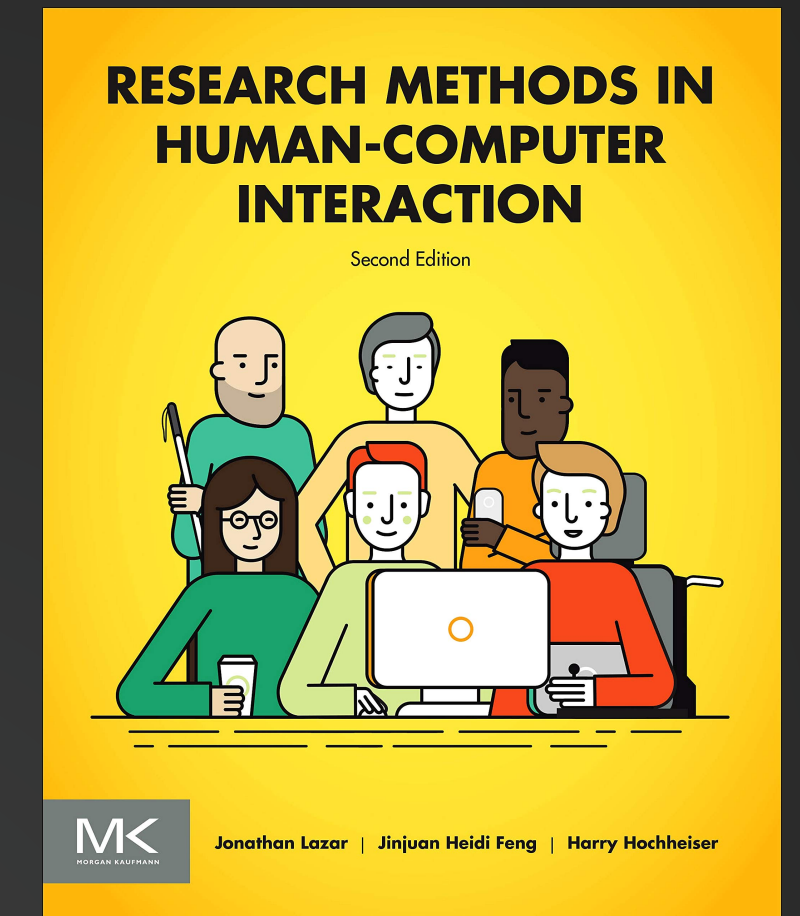
Literature Sources

- Recent conference papers

  - CHI, UIST, ISS, DIS, Ubicomp,…

- Recent journal articles

  - TOCHI,…

Literature Sources

- Recent books

  - Research Methods in HCI (Lazar et al., 2017)

    - Highly **recommended** reading for more details about evaluation methods—especially if you are considering to do your thesis at our chair!

  - Research Methods for the Behavioral Sciences (Gravetter and Forzano, 2015)

    - Further **recommended** reading for more details about experimental research methods

Final Grade

Midterm exam
30%

Final exam
45%

Assignments & project
25%

Prof. Dr. Jan Borchers: Current Topics in Media Computing and HCI
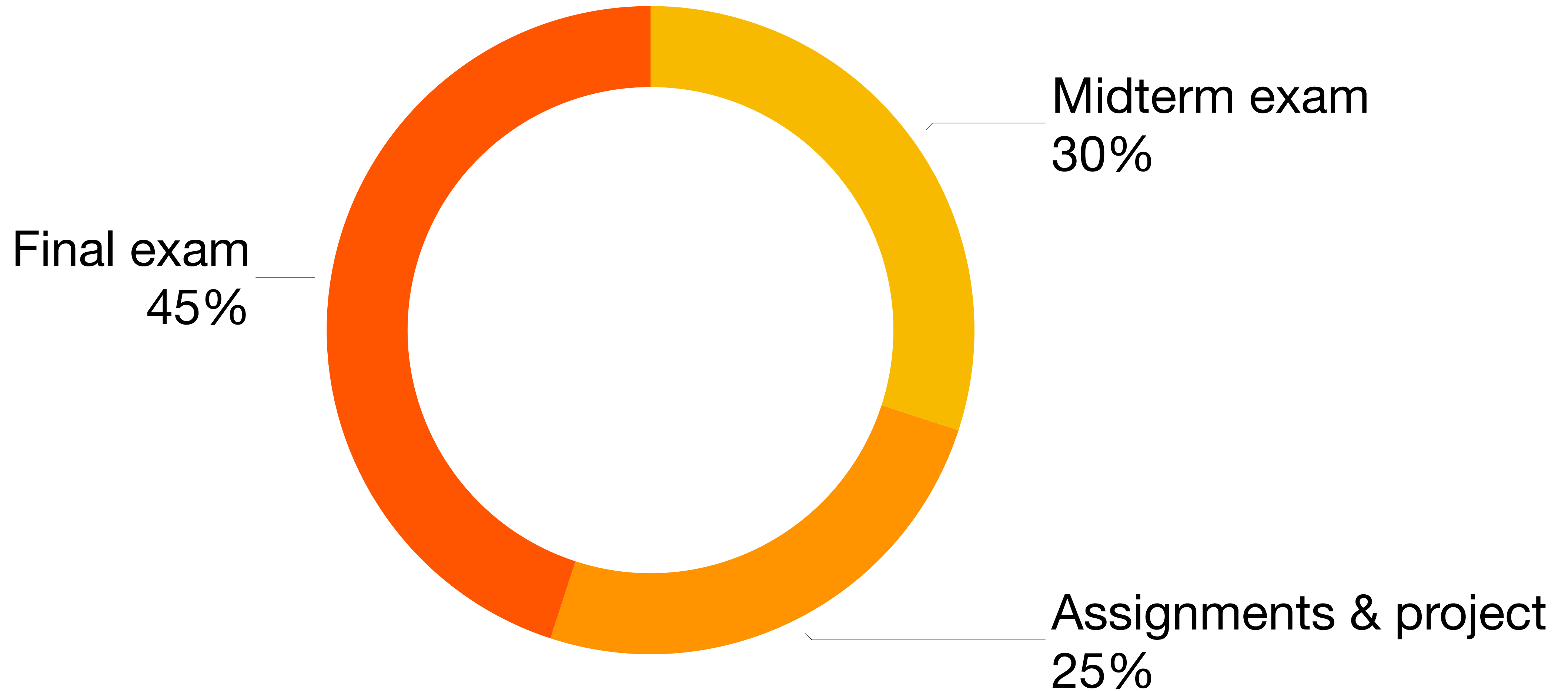
Plagiarism

Usability testing—whether inside a lab facility, using portable equipment, or outside of a lab facility—was rated highest as an effective usability methodology to create greater strategic impact. One reason for this high rating

"Usability testing–whether inside a lab facility, using portable equipment, or outside of a lab facility–was rated highest as an effective usability methodology to create greater strategic impact." **[1]**

Usability testing has the largest impact on strategic improvement **[1]**.

[1] Rosenbaum, Stephanie, Janice Anne Rohn, and Judee Humburg. "A toolkit for strategic usability: results from workshops, panels, and surveys." Proceedings of the SIGCHI conference on Human Factors in Computing Systems. ACM, 2000.

Cite and quote instead of plagiarizing!

Consequences of Plagiarism in this Class

- Plagiarism will result in an immediate 5.0 for this class.

- Repeated plagiarism will also lead to banning from all other i10 classes.

- Sign the declaration of compliance and hand it in during the lab.

Limited Seats

- **30 seats** available

- Register in RWTHonline **today**

- Seats will be assigned on April 9th

Current Topics in HCI (Summer '19)

This class covers basic research methods and current research trends in Human–Computer Interaction. We use a mix of recent book chapters and papers from conferences and journals of the last few years to give you an idea of how HCI research is conducted, and of the hot topics that are being worked on in the international research community. Examples from past years include interactive surfaces, tangible user interfaces, human computation, gestural input, interactive textiles, augmented reality, and personal fabrication.

The class explains the differences between empirical, ethnographic and systems research in HCI, and how to quickly retrieve and evaluate information from existing literature, a skill you will need for your Master's thesis and future research work in HCI.
The class consists of weekly labs, studios, group assignments, reading assignments, a group project, and graded written midterm and final examinations.

The first part of this class is taught in a **flipped classroom** style in which you will be able to watch online videos of individual topics at your own pace. The **studios** will be for reviewing the learned concepts, hands-on exercises, Q&A, and for introducing new assignments. The **labs** will be for assignment discussions and one-on-one feedback. In the second part of this class, the **studios** are dedicated for presenting new topics in HCI, and the **labs** are for project work and face-to-face discussions.

Class Times

Lecture	Tue, 10:30 - 12:00
	2222, i10 Seminar room
Lab	Wed, 12:30 - 14:00
	2222, i10 Seminar room
Language	English
Credits	6

Exams

Midterm	Tue, May 21st, TBA
Final PT1	Wed, Jul 24th, 11:30
Final PT2	Wed, Aug 14th, 11:30

Contact

Prof. Dr. Jan Borchers

Marcel Lahaye

Oliver Nowak

For any questions about the class, please contact Marcel Lahaye, MSc or Oliver Nowak, MSc.

Quick Links

▸ RWTHonline
▸ Moodle
▸ iTunes U
▸ Flipped Classroom Videos

Syllabus

What to do now?

Download and watch the videos from the website!

Sign and hand in the declaration of compliance!