Proseminar Medieninformatik
Winter term 2020/21

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Team

Heinrich Hußmann  Sven Mayer  Sebastian Feger  Jingyi Li  Francesco Chiossi
Zoom Course Protocol

- You are muted by hosts during the presentation.
- Please type “HERE” in group chat or hand-raise function when you want to speak out, e.g., hands-on session or anytime you have a question.
- Always have your video on if possible. Its nicer for everyone.

- Please respect others’ presentation and intellectual property. No recording. No second usage.
  - Strongly punished: expelled from the course
  - Link to official policy: http://www.medien.ifi.lmu.de/online-lehre/ifi-statement.xhtml.de
Contact us

- Link: http://www.medien.ifi.lmu.de/lehre/ws2021/ps/
- Discord: https://discord.gg/weWAAApR
Agenda

- Goals
  - Organization
  - How to write a research paper (hands-on session)
  - Scientific literature review
  - Topic assignment
Goals

- Learn to work scientifically
- Prepare for your Bachelor thesis
- Learn something about a new topic
- Practice your English
Agenda

- Goals

- Organization
  - How to write a research paper (hands-on session)
  - Scientific literature review
  - Topic assignment
Process

- Research topic > understand it > find literature > write paper
Timeline

- **24.11.20**: Submit pitch
- **27.11.20**: Pitch
- **22.01.21**: Submit outline + abstract
- **08.02.21**: Submit final paper + presentation
- **18.+19.02.21**: Final presentation

Today: Intro
Submissions

- All submissions via Uni2work, zipped
- Short presentation submission: **Tue 24.11.20 (23:59)**
  - Lastname_Title_Spr.pdf

- Paper abstract & outline & lead paper submission: **Fri 22.01.21 (23:59)**
  - Lastname_Title_Ou.zip

- Presentation submission: **Mon 08.02.21 (23:59)**
  - Lastname_Title_Pr.pdf

- Paper Submission: **Mon 08.02.21 (23:59)**
  - Lastname_Title_Pa.pdf
Presentations - Time and Location

- Short pitch presentations:
  - Friday, 27.11.2021 (14:00 - 16:00), Zoom

- Final presentation sessions:
  - Thursday, 18.02.2021 (13:00 - 17:00), Zoom*
  - Friday, 19.02.2021 (13:00 - 17:00), Zoom*

* Presentations will take place in person only after major changes of the current COVID-19 situation, which will be announced earliest end of January
Pitch Presentation

- Introduce your topic in 90 seconds (in English)
  - Check out pitch guidelines [1]
  - Also check out “3 Minute Thesis”
- Max 3 slides
  - PDF format – no animations

[1] https://mindfulsalestraining.net/pitch-your-idea-in-90-seconds-or-less/
Paper – Outline & Abstract

- Interesting title (not just the research topic)
- Abstract ~150 words
- Section headings + bullet points
- Putting effort into a good outline saves time and effort later
- Submission: Outline & Abstract in template as one PDF (zipped)
- LaTeX template [1] (ACM SIGCHI Conference template)
  - Remove placeholder text and images!


LFE Medieninformatik - Proseminar Medieninformatik - WS2021

22.01.21
Submit outline + abstract
Final Paper Submission

- Four pages in English at least
  - Including references
- Use figures, diagrams, and images to illustrate
  - Refer to them in text!

- Submission: PDF (zipped)

08.02.21
Submit final paper + presentation

18.+19.02.21
Final presentation
Presentation

- 15 min presentation (in English)
- 5 min discussion (in English)

- No slide template – be creative!
  - Many tips on the web, e.g. [1]
  - **Max. 10 words per slide** – Use figures and diagrams!
- Anticipate questions and prepare answer slides (backup-slides)

[2] https://opac.ub.uni-muenchen.de/TouchPoint/perma.do?q=+0%3D%224821872%22+IN+%5B2%5D&v=sunrise&l=de
Evaluation

- Checklist
  - Structure
  - Extent
  - Citation
  - Abstract
  - Language
  - Design
  - Goal description/contribution
  - Related work
  - Innovation
  - Coherence

All 4 submissions (short presentation slides, outline, final presentation slides, and paper) have to be submitted completely and in time.

Incomplete or delayed submission may not be considered.

Paper: 67%
Presentation: 33%
Agenda

▪ Goals
▪ Organization

▪ How to write a research paper (hands-on session)
▪ Scientific literature review
▪ Topic assignment
Abstract Assessment

- Reading Material
- 8 mins ~150 words:
  - Get markers with different colors. Chose for each number a color. Color each sentence in the abstract according to which category (number) it belongs.

1. What is the specific problem addressed?
2. What have you done?
3. What did you find out? What are the concrete results?
4. What are the implications on a larger scale? How does it change the bigger picture?

Share your answer in the chat.

1. What is the specific problem addressed?
2. What have you done?
3. What did you find out?
   ▪ What are the concrete results?
4. What are the implications on a larger scale?
   ▪ How does it change the bigger picture?

Abstract

(1) For years the HCI community has struggled to integrate design in research and practice. (2) While design has gained a strong foothold in practice, it has had much less impact on the HCI research community. (3) In this paper we propose a new model for interaction design research within HCI. (4) Following a research through design approach, designers produce novel integrations of HCI research in an attempt to make the right thing: a product that transforms the world from its current state to a preferred state. (5) This model allows interaction designers to make research contributions based on their strength in addressing under-constrained problems. (6) To formalize this model, we provide a set of four lenses for evaluating the research contribution and a set of three examples to illustrate the benefits of this type of research.
Introduction Assessment

- Same Reading Material, 15 mins for introduction:
- Mark 1-2 sentences as your answers

1. What is the large scope of the problem?
2. What is the specific problem?
3. Why is the problem important? Why was this work carried out?
4. What have you done?
5. What is new about your work?
6. What did you find out? What are the concrete results?
7. What are the implications? What does this mean for the bigger picture?
Discussion – Introduction

1. What is the large scope of the problem?
2. What is the specific problem?
3. Why is the problem important? Why was this work carried out?
4. What have you done?
5. What is new about your work?
6. What did you find out? What are the concrete results?
7. What are the implications? What does this mean for the bigger picture?
Discussion – Introduction

1. What is the large scope of the problem? 2. What is the specific problem? 3. Why is the problem important? Why was this work carried out? 4. What have you done? 5. What is new about your work? 6. What did you find out? What are the concrete results? 7. What are the implications? What does this mean for the bigger picture?

1. In recent years we have both witnessed and participated in the struggle as several academic institutions have attempted to integrate design, with technology and behavioral science in support of HCI education and research. 2. While there has been great excitement about the benefits integrating design can bring, we quickly realized that no agreed upon research model existed for interaction designers to make research contributions other than the development and evaluation of new design methods. 4. Over the last two years we have undertaken a research project to (i) understand the nature of the relationship between interaction design and the HCI research community, and (ii) to discover and invent methods for interaction design researchers to more effectively participate in HCI research.

5. To address this situation, this paper makes two contributions: (i) a model of interaction design research designed to benefit the HCI research and practice communities, and (ii) a set of criteria for evaluating the quality of an interaction design research contribution. 4. The model is based on Frayling’s research through design [14], and it stresses how interaction designers can engage “wicked problems” [21]. 5. What is unique to this approach to interaction design research is that it stresses design artifacts as outcomes that can transform the world from its current state to a preferred state. The artifacts produced in this type of research become design exemplars, providing an appropriate conduit for research findings to easily transfer to the HCI research and practice communities. 7. While we in no way intend for this to be the only type of research contribution interaction designers can make, we view it as an important contribution in that it allows designers to employ their strongest skills in making a research contribution and in that it fits well within the current collaborative and interdisciplinary structure of HCI research.
Introduction

▪ What is the problem?

▪ Why is it important?

▪ Introduce your paper/approach

Examples [1]
Pw: bestpractice

(Do NOT refer to the old template and paper length.)

[1] https://www.medien.ifi.lmu.de/lehre/ss19/ps/materials/Proseminar_Beipielarbeiten.zip
Related Work

- Design Space, deep discussion of related work. *Don’t only tell what is in the paper, think beyond!* Connect the papers to a meaningful text, don’t just list summaries!

- A mind map helps logical thinking.
Methodology

- Approaches and methods
- Systematic review
Results

- Non-interpreted results
- Description
- Statistics
- Quotes from participants
Discussion

- Interpreted results in relation to related work
Conclusion

- Short summary
- What was done?
- Future Work
- What is missing in related work?
Everything you write in your paper must be supported by literature!
Think about a logical structure of your arguments

Scientific writing is objective, precise, and neutral
- Numbers from zero to twelve are written as text
- First full terminology „virtual reality“, then abbreviation „VR“
- Abbreviations: “i.e.” = that is, “e.g.” = for example
DON‘Ts:
- Passive voice
- Unprecise quantities ("high", “slightly”, “almost”, “a little bit”)
- Fillers (“now”, “well”, “quasi”)
- Pseudo-Arguments ("naturally", “as expected”)
- "state" better than “make a statement“ -> avoid nominal style, use verbal style!
Literatur

- Writing and Presenting in English
- PDF Download from the UB [1]

[1] https://opac.ub.uni-muenchen.de/TouchPoint/perma.do?q=+0%3D%22ZDB-30-PAD-EBC285807%22+IN+%5B2%5D&v=sunrise&l=de
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Research in General

- Starting point for your work: your topic
  - First orientation
  - Look for synonyms, leading researchers, frequently cited literature
  - Some source can NOT be used (e.g., online articles without author, contributions in online communities, Wikipedia)
  - References: Papers, conference proceedings, journals, books, and online sources with author and date of access
Finding Literature

- Almost all literature is available online!
  - Google/Google Scholar (http://scholar.google.com)
  - ACM Digital Library (https://dl.acm.org/)
  - Citeseer (http://citeseer.ist.psu.edu)
  - IEEE Xplore (http://ieeexplore.ieee.org)
  - Springer (https://link.springer.com)
  - Elsevier (https://www.elsevier.com/catalog)
  - ScienceDirect (www.sciencedirect.com)
  - Semantic Scholar (https://www.semanticscholar.org/)
  - Microsoft Academic (https://academic.microsoft.com)
  - OPAC der Universitätsbibliothek (http://opacplus.ub.uni-muenchen.de)

- For the full functionality log in at
  - „LMU E-Medien-Login/Datenbanken“
  - and find the needed library (e.g., ACM DL)
Finding Literature (Google Scholar)
ABSTRACT

This two-day workshop will bring together an interdisciplinary group of designers and practitioners who are interested in the topic of wellbeing and interaction design. Wellbeing is defined as positive mental health, and of mental illness, but also the presence of positive psychological function, which will provide a platform to share resources, create new ideas for design, and enable future collaborations. During the first day participants will present their research and exchange their knowledge and experiences in the field. The workshop will include interactive activities to support participants in collaboratively constructing understanding of the concept of wellbeing and its challenges in terms of user engagement.
HCI Flagship Publications

- Conference (SIGCHI [1]):
  - CHI
  - CSCW
  - UIST
  - IUI
  - MobileHCI
  - DIS
  - ISS
  - ....

- Journal:
  - TOCHI
  - IJHCS
  - CSCW
  - IWC
  - IMWUT (formerly UbiComp)
  - ....

[1] https://sigchi.org/conferences/upcoming-conferences/
Systematic Review

1. Review question: clearly stated objectives (may include secondary ones)

2. Literature search:
   - Comprehensive literature search conducted
   - Searched information sources listed (i.e., ACM Library)
   - Keywords used for electronic literature search provided („tech and wellbeing“)
   - Manual search conducted through references of articles, abstracts
3. Data Abstraction*:
   - Structured data abstraction form used
   - Disagreements listed between authors and how they were resolved
   - Characteristics of studies listed (i.e., manuscript type, keyword interpretation)
   - Inclusion and exclusion criteria provided for studies
   - Number of excluded studies and reasons for exclusion included
   - Variables of interest (primary and secondary variables)
Systematic Review

- You do NOT necessarily follow all steps.
- Five GOOD papers are essential in your review.

- More Reading Material:
  - ACM Computing Surveys [1]

[1] https://dl.acm.org/journal/csur
Why should I care about citations?

- Copyright / intellectual property
- Foundation of scientific work
- Citations links belonging work together
- Reader needs all the information you had to check if you are correct
Citations

- Quotation
  - Direct (in quotation marks) -> “text text“ [1]
  - Indirect -> Mustermann et al. [1]
  - No secondary citation

- Wikipedia: not citable (but good for quick research)

- Citation style:
  [http://www.medien.ifi.lmu.de/studierende/abschlussarbeiten/master/richtlinien.xhtml#zitate-und-quellenangaben](http://www.medien.ifi.lmu.de/studierende/abschlussarbeiten/master/richtlinien.xhtml#zitate-und-quellenangaben)
# Citations APA (.bib template in Latex)

## BOOKS

<table>
<thead>
<tr>
<th>In-text Reference</th>
<th>Reference List</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Note</em>: There are two main ways to use in-text references. Firstly, to focus on the information from your source – <em>information prominent</em>: The conclusion reached in a recent study (Cochrane, 2007) was that... &lt;br&gt;OR &lt;br&gt;<em>Author prominent</em> (the author’s name is outside the parentheses): &lt;br&gt;Cochrane (2007) concluded that...</td>
<td></td>
</tr>
<tr>
<td>A discussion about Australia’s place in today’s world (Richards, 1897) included reference to... &lt;br&gt;OR &lt;br&gt;Richards (1907) proposed that...</td>
<td></td>
</tr>
</tbody>
</table>

## JOURNAL, NEWSPAPER & NEWSLETTER ARTICLES

<table>
<thead>
<tr>
<th>In-text Reference</th>
<th>Reference List</th>
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</thead>
<tbody>
<tr>
<td>If each issue of a journal begins on page 1, include the issue number in parenthesis immediately after the volume number in the Reference List.</td>
<td></td>
</tr>
<tr>
<td><strong>Journal article with two authors – continuous paging throughout a volume.</strong></td>
<td>Kramer and Bloggs (2002) stipulated in their latest article... &lt;br&gt;OR &lt;br&gt;This article on art (Kramer &amp; Bloggs, 2002) stipulated that...</td>
</tr>
<tr>
<td>If the journal volume page numbers run continuously throughout the year, regardless of issue number, do not include the issue number in your Reference List entry.</td>
<td></td>
</tr>
</tbody>
</table>
Plagiarism

- No plagiarism, NO plagiarism, not even a little!
- Plagiarism
  - Material of third parties, without reference
  - Direct quotations, without reference
  - Copied pictures, diagrams, or graphics without reference
- Your work will be checked automatically
- Work with plagiarism will fail the course!
- http://www.medien.ifi.lmu.de/lehre/Plagiate-lfl.pdf
How to LaTeX
LaTeX

- Text formatting
- No WYSIWYG, instead creation of source code
- Integration of pictures and diagrams in the final document
- Integration of references (with linkage to Zotero, Citavi, EndNote, BibTex…)
- Very nice typography
- No formatting mistakes when creating the text
- Huge number of online tutorials available [1, 2]

[2] https://www.overleaf.com/learn/latex/Learn_LaTeX_in_30_minutes
Example Creation of a Document

\title{Mein Titel}
\tableofcontents
\section{Überschrift}
Text des Kapitels 1 ...
\subsection{Unterüberschrift}
Text des Kapitels 1.1 ...
~\cite{Huber}

@article{Huber,
  author = "Egon Huber",
  title = "Implementing ...",
  journal = "Computer",
  year = "2001",
  ...}

Fertiges Dokument
Overleaf  
https://www.overleaf.com/
Mendeley https://www.mendeley.com/
Other Reference Managers

- Citavi
  - http://www.ub.uni-muenchen.de/schreiben/literaturverwaltung/citavi/index.html

- JabRef
  - http://www.jabref.org/
Example workflow

Finding Papers

Search for relevant terms

Read abstract

Relevant? → Reject

Save and read

Citing Papers

Export bibliography

Import to Overleaf

Cite in Overleaf
Workflow Live Demo
Further Information on LaTeX

- If you want to use LaTeX without Overleaf:
  - Mac OS: MacTex ([http://tug.org/mactex/](http://tug.org/mactex/)), with TeXShop IDE ([http://www.uoregon.edu/~koch/texshop/index.html](http://www.uoregon.edu/~koch/texshop/index.html)) or TexMaker ([http://www.xm1math.net/texmaker/](http://www.xm1math.net/texmaker/)) or Sublime

- Download LaTeX-Templates
  - Open .tex- and .bib-file in your IDE, check and understand the source files
  - Setup LaTeX => PDF, compile .tex-file twice
  - Further help can also be found online and in dedicated LaTeX-Tutorials
LaTeX Resources

- LaTeX-Packages and Documentation (http://www.ctan.org)
- A (Not So) Short Introduction to LaTeX2e (http://www.ctan.org/tex-archive/info/lshort/english/)
- LaTeX Symbols List (http://www.ctan.org/tex-archive/info/symbols/comprehensive/)
- Import and format graphics (http://tug.ctan.org/tex-archive/info/epslatex/english/epslatex.pdf)
- German FAQs (http://www.dante.de/faq/de-tex-faq/html/de-tex-faq.html)

- BibTeXs can often be found in the digital libraries themselves (e.g., ACM, IEEE)
- How-To: http://www.bibtex.org/Using/de/
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### PS I: Topics

**Supervisor: Jingyi Li**

1. Passenger VR experience
2. Passenger AR experience
3. VR interaction in confined spaces
4. Haptic feedback for VR interaction
5. Physiological measurements for VR interaction
6. Motion/simulator-sickness in VR
7. Social experience in public VR
8. VR for productivity
9. VR for meditation
10. Review of recommended practice J3016
11. Reality and Virtuality Continuum in the Car

**Supervisor: Francesco Chiossi**

1. What is an interruption?
2. Measures for task engagement
3. Physiological sensing in HCI
4. Task Engagement in VR
5. When an interruption is fruitful for the task?
6. Physiological sensing for detecting distraction
7. Measuring cognitive distraction from a behavioral perspective
8. Task interruption and resumption
9. Notifications vs Interruption vs Distraction
10. How investigate distraction remotely?
11. Measuring Immersion in VR

*Topics can be adapted (with our agreement!)*
## PS II: Topics

**Supervisor: Sven Mayer**

1. Bimanual Mid-Air Pointing
2. MAGIC Pointing
3. Gesture Interactions for Multi-Screen Setups
4. On-Screen Tangibles
5. Pressure Based Touch Input
6. Control Less Input in VR
7. Mobile Camera Based Eye Tracking
8. Social Interruptibility
9. Interaction in Control Rooms
10. Methods to Measure Workload
11. Bystander Inclusion in VR

**Supervisor: Sebastian Feger**

1. Gamification in Science
2. Gamification Player Types Design
3. Motivating Documentation
4. Open/Reproducible Science in HCI
5. Tools That Foster Collaboration
6. Tools That Support Reuse
7. Motivating Valuable Practices
8. Skills in Simulated Environments
9. Communicating IoT Device Security to Users
10. Informing Users about IoT Device Privacy
11. Recall and Memory of Recorded Everyday Data

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Topics can be adapted (with our agreement!)
Office Hours

Available by appointment.

Send an email to schedule a video chat depending on your topic supervisor:

Francesco Chiossi (francesco.chiossi@um.ifi.lmu.de)
Jingyi Li (jingyi.li@ifi.lmu.de)
Sven Mayer (sven.mayer@ifi.lmu.de)
Sebastian Feger (sebastian.feger@um.ifi.lmu.de)