

Privacy-Aware and Acceptable Video-Based Technologies and Services for Active and Assisted Living



Perceptions of personal privacy in different users regarding health monitoring technologies

Education

April 2021 – March 2024

Ph.D. Candidate

Human-Computer Interaction Center, RWTH Aachen University, Aachen (Germany)

August 2020

MSc. Applied Cognitive Psychology

Utrecht University, Utrecht (The Netherlands)

January 2018

BSc. Communication

Università della Svizzera Italiana, Lugano (Switzerland) Major: Corporate Communication

External Research Experience

May 2022 – July 2022

Visiting researcher

University of Alicante,
Alicante (Spain)
Department of Computer Science and
Technology

Sept. 2023 – Dec. 2023

Visiting Researcher

Austrian Institute of Technology (AIT) Vienna (Austria) Center for Technology Experience

Non-academic Work Experience

Dec. 2018 – August 2019
Corporate Office Assistant

Tschuggen Hotel Group AG, Ascona (Switzerland)

Nov. 2017 – May 2018

Intern Client Consulting

Erdmannpeisker GmbH, Biel/Bienne (Switzerland)

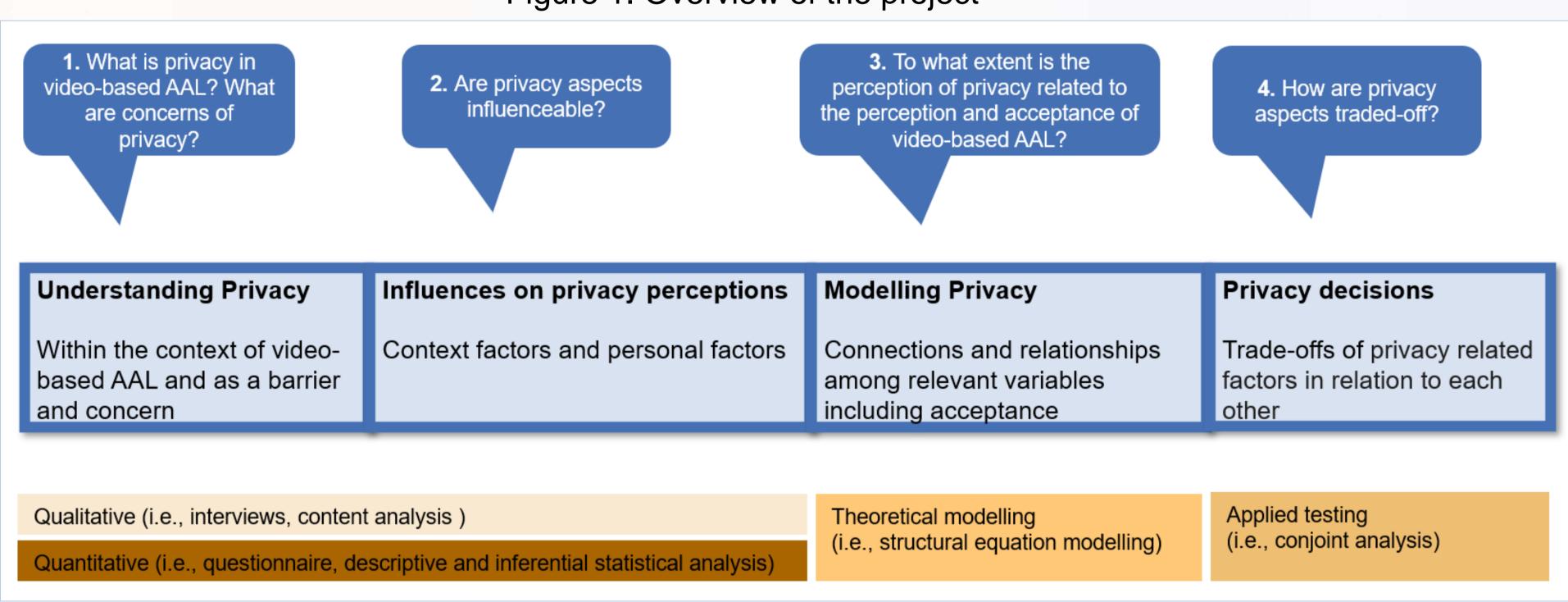
Caterina Maidhof, MSc.
Campus Boulevard 57
52074 Aachen, Germany
maidhof@comm.rwth-aachen.de





This project seeks to identify differently perceived dimensions and degrees of personal privacy by potential users of a video-based health technologies. Therefore, context-specific privacy needs, privacy preferences and concerns as well as trade-offs of potential users of different video-based technologies are examined. This project mainly targets older adults, who have experiences with chronic illnesses and care. Besides identifying privacy graduations, the goal is to gain an elaborate understanding of privacy as an influencing factor of these video-based technologies for health purposes. The here resulting graduations of privacy can then be elaborated and appropriately concerned by respective stakeholders such as technical designers or technology manufacturers.

Figure 1. Overview of the project



- Handling of data and technology, the filming of sensitive activities and the feeling of privacy invasion are important topics among potential users of video-based technologies. Privacy invasion is least critical for physicians and most critical for public institutions. Nudity and visualization of skin have a negative influence on technology acceptance. (Maidhof et al., 2022; Maidhof & Hashemifard, 2022; Maidhof et al., 2023b)
- Privacy need differs depending on the activity performed (context) and video-based monitoring is evaluated differently in terms of benefits and barriers of usage depending on the activity being filmed. Age, self-consciousness and privacy understanding (personal factors) in daily life seem to influence video-based technology evaluations.

 (Maidhof et al., 2023a; Maidhof et al., 2023c)
- Privacy need for an intimate activity, preferences for visualization and data access have a significant direct negative effect on privacy barriers of using video-based technologies.
- In conjunction with preferences for data access, storage duration and location and the type of activity being filmed, the visualization of the own body in the data output is the most important aspect in the decision for the optimal video-based tech-set up.

Future Interests

I am interested how people live and mentally conceptualize interactions with various technologies including artificial intelligence and how they deal with less tangible aspects of privacy and security.

- Conducting mixed-method (qualitative and quantitative) studies with a broad range of user groups
- Ideally working closely together with relevant user groups to achieve a more secure and accepted interaction with technological devices and networks that ideally contributes to a greater well-being









