



# Comparing Gaze Behavior in the Real World with AR/VR

## Open Bachelor/Master Thesis

### Background

The small form factor of wearable eye tracking devices enables it to use the technology for studies in mobile, real world scenarios. Especially the combination of eye tracking and head-mounted displays (HMDs) can be very beneficial for both technologies. A lot of examples show how augmented and virtual reality (AR/VR) can benefit from eye tracking (e.g. foveated rendering, attentive user interfaces, social interaction with avatars, etc.). However, HMDs mostly influence and aim at the visual channel of a user and as such may change how the human eye reacts to certain stimuli.

### Research Goal

The aim of this thesis is to compare and evaluate different eye measures in the real world and in augmented and/or virtual reality. For this several studies have to be conducted. Based on the results and on bachelor/master level certain guidelines and/or example applications how to successfully use eye tracking for interaction in AR/VR have to be developed.

Teresa Hirzle  
Institut für Medieninformatik  
O27/3302

[teresa.hirzle@uni-ulm.de](mailto:teresa.hirzle@uni-ulm.de)

