



Paid Student assistants (SHK/WHK) wanted from September 2022:

[Fluent German is necessary for communicating with study participants.]

Neurocognitive correlates of plausible vibrotactile stimulation in older adults

In recent years, the development of virtual reality (VR) technologies has demonstrated an immense potential in contributing to various fields such as education and medicine. Therefore, it is crucial to construct VR environments and events which conform to the user's expectations (i.e., highly plausible virtual environments) to achieve realistic VR experiences. Since VR technology is increasingly used for rehabilitation in older adults, it is important to understand the perception of the plausibility of vibrotactile stimulations in VR environments in older adults. More importantly, aging-related effects on the neurocognitive mechanisms underlying contextual expectancy in perceiving the plausibility of VR environments is also not known. Therefore, we aim to identify aging-related effects on the neurocognitive mechanisms underlying the plausibility of vibrotactile stimulation in a VR environment.



In this study, we will collect neuroimaging data using functional near infrared spectroscopy (fNIRS) data while participants (older adults) experience vibrotactile stimulations which could either be congruent or incongruent with the audio-visual scene that they are viewing. By participating in this project, you will gain experience setting up, collecting and pre-processing fNIRS data. There is also potential to do a Bachelor's or Master's thesis in this project.

Summary

Project timeline	: September 2022 - December 2022
Earliest start date	: September 2022
Workload	: 6h/week (negotiable)
Required Skill Level	: Bachelor's and Master's students
Responsibilities	: Recruitment, data collection, and data processing
Benefits	: 1) Learn how to set up virtual reality (VR) experiments 2) Collecting and processing fNIRS data
Supervisor	: Dr. Kathleen Kang

Contact Information

Dr. Kathleen Kang, kathleen_yen_li.kang@tu-dresden.de
Chair of Lifespan Developmental Neuroscience, Zellescher Weg 17, Room A235