Master thesis opportunity

**ExerG: Exergame training in the elderly – a pilot randomised controlled trial (RCT)**

**Background:**
The World Health Organization's 'Global report on falls prevention in older age' (2007) shows that around 28-35% of people aged 65 years and over fall each year. Falls can lead to long-term health, psychological and social consequences and substantially increase health care costs. Systematic reviews demonstrated that specific physical and cognitive exercises significantly improve walking and postural control and thus reduce fall rates in older people with and without disabilities. An up-coming training approach that seems to have the potential to face the above-mentioned challenges in older adults are so-called exergames. Exergames can be used in various application fields (e.g., rehabilitation and prevention) and target populations due to the broad range of design possibilities. In an EU-funded project, the existing exergame environment, the ExerCube (https://sphery.ch), is to be adapted for older people in rehabilitation.

**Aim:**
This sub-project aims to implement a two-arm pilot randomised (1:1) controlled trial with 12 in- or outpatients from the geriatric or neurological rehabilitation. The aim is to evaluate feasibility (recruitment rate, patient adherence) and attractivity parameters (motivational aspects of the games/device), as well as to get preliminary indications about the effectiveness of the new ExerG system.

**Tasks:**
The successful candidate will implement the pilot RCT including patient recruitment, patient training and assessment sessions. Further he/she will be responsible for data analysis (qualitative and quantitative) with different software solutions (Excel, SPSS, or similar).

**Students:** 1 – 2 students can work on the project.

**Requirements:**
- Interest in gaining a deeper knowledge of exergames in the context of rehabilitation
- Friendly and courteous treatment of patients
- Proficiency in use of MS Office
- Basic knowledge of qualitative and quantitative data analysis with appropriate software
- Highly motivated and team-oriented working morale

**Offer:**
- Working within an international research project with partners in Switzerland, Austria, and Canada
- Introduction and supervision throughout the entire project
- Exciting opportunities in an interdisciplinary environment of clinical research and rehabilitation
- Possibility to visit various departments involved in rehabilitation of neurologic and orthopaedic patients.

**Time period:**
Begin Summer 2022. Duration: 6 to 9 months.

For further questions, please contact Dr. C. Schuster-Amft, Research Department, Reha Rheinfelden (c.schuster@reha-rhf.ch). To view other opportunities at our department, go to: https://www.reha-rheinfelden.ch/ueber-uns/wissenschaft/