

The theme of this thesis is using stabilometric platform Nintendo Wii Balance Board to home therapy of balance. The therapy utilizes visual biofeedback. Visual biofeedback is important for maintaining balance. All the studies which were used in this work and deal with this issue, are demonstrating the positive impact of visual feedback for stability. Authors of numerous studies indicate the possibility of using commercial gaming system for this type of therapy. They often mention Kinect, Nintendo and PlayStation. These gaming systems are based on virtual reality which allows to expose the patient to situations that are difficult for them. It enables the training of these situations. Nowadays, the difficulty of created situations is the subject of many discussions. Fast interaction is often necessary for commercial games, and therefore they may not always be an appropriate therapy tools. On this initiative, special programs were created and designed specifically for the therapy. The theoretical part describes three programs which are useful for home therapy of stability or have the potential for that. These programs are HomeBalance, Easy Balance Virtual Rehabilitation (eBaViR) and The Intelligent Game Engine for Rehabilitation (IGER). In the practical part is verified the effect of this therapy on two patients. One of the mentioned programmes was used for home therapy. It was the software HomeBalance. Two standardized tests called BBS and TUG, and two objective examinations, Synapsys Posturography System and Footscan were used to evaluate the effect of therapy.

**Key words:** virtual reality, visual biofeedback, stabilometric platform, balance, Nintendo Wii Balance Board