

## **The title of the work:**

Influencing gait stereotype in post stroke patients with unstable knee joint through physiotherapy

### **Abstract:**

Physiotherapy with patients after a vascular brain stroke is a complex process which requires multidisciplinary care. The aim of this Bachelor thesis is to find out whether it is possible to influence instability of the knee joint with the hemiparetic patients by means of physiotherapy. The objectivity of results has been ensured by the implementation of standardized tests: the Rivermead visual gait assessment and the Timed Up and Go Test.

The theoretical part focuses on the issue of vascular brain strokes, functional anatomy of the knee joint, the gait cycle and its analysis, the pathological gait stereotype with hemiparetic patients and the possibility of the unstable knee joint therapy with these patients.

In the practical section I described the methodology, the methods used during the research, the aim of this thesis and the research sample. A part of this section are two case studies and the description of their therapy development. By means of a standardized test and a video recording of the patients' gait I compared the stability of the knee joint before and after the therapy. The results have answered the basic questions asked in this thesis.

**Key words:** hemiparetic patient, balancing platforms, stroke, pathological gait stereotype, functional anatomy of the knee joint, gait evaluating tests, gait cycle analysis