Damage to the knee joint represents in terms of both incidence and severity of the consequences in terms of the ever-increasing problem in the most productive age population (1). Development and application of modern technologies, especially three-dimensional kinematics, provides comprehensive insight into the pathogenesis of disorders of the musculoskeletal system.
Title: Ventral Translation of the Tibia within the Knee Joint: Quanitative Analysis in 3D and the Rollimeter Device

The aim of the thesis deals with the quantification of selected kinematic characteristics of the knee. Kinematic analysis will undergo anterior tibial displacement in tibiofemorálním joint. This small movement has a small range, but is an essential prerequisite for movement in the joint (2.27).

The solution will be used photoelectric system Qualisys Motion Capture Systems (QMCS), a new device Rollimetr. Experimental data obtained from both methodological procedures will be handled by software, then compared and aligned with current kinematic and clinical knowledge.

Keywords: kinematics, 3D analysis, knee joint, ventral displacement