

## **Abstrakt**

**Title (Thema works):** Comparison of support phase in the take-off to the hurdle and touch-down after hurdle clearance in disciplines 110 m hurdles and 400 m hurdles

**Thesis' objectives:** The objectives of the study are to identify differences in centre of pressure trajectory, in amount and distribution of pressure on foot during the take-off to the hurdle and touch-down after hurdle. This was measured on 110m (100m) and 400m tracks.

**Methods:** Measurements were made with the help of Pedar-x system. Subjects were tested in three trials from the first hurdle to the third hurdle on 110m (100m) and 400m tracks. Hurdle with the shortest flight phase was later analyzed.

**Results:** Difference in the take-off to the hurdle between 110m (100m) and 400m is in distribution of pressure and in centre of pressure trajectory only during the braking phase. Difference in distribution of pressure in touch-down after hurdle on 110m (100m) and 400m track was found between active and passive landing. The centre of pressure trajectory in touch-down after hurdle is longer on 400m track.

**Key words:** hurdles, biomechanics, support phase, Pedar-x