

## **Abstract**

**Title:** Methodology of the measurement of the speed approach at jumping events

**Objectives:** The objective of this thesis is to provide the methodology of measuring the approach speed using a radar, a camera and a photocell. It also aims to compare the individual devices for measuring the approach speed (the camera, the photocell, the radar) and to state their advantages and disadvantages. Last but not least, the thesis will define usage of data from measuring for the purposes of coaching practice.

**Methods:** In my thesis I used the document analysis method. I used foreign publication as well as Czech literature as my sources. The foreign sources consisted mainly of specialized magazine articles or online publications focused on the topic of measuring the approach speed and the athletic event of jumping. As for the Czech literature, it comprised mainly of books about the athletic event of jumping. Gathered information was used during the experiment itself and during data assessment.

**Results:** The difference among the individual devices can be clearly seen from the results, the recorded times differed by 0,01–0,02 s. The difference is noticeable even in the methodology of measuring and in data assessment. At the end, it was determined according to the coaching criteria, which device is the most suitable in pre-started circumstances.

**Keywords:** long jump, pole vault, triple jump, photocell, radar, camera, approach speed