

ABSTRACT OF BACHELOR THESIS:

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Oponent:

Title of bachelor thesis:

Application of inertial sensors in physiotherapy

Key words:

inertial sensors, fyzioterapie, accelerometr, gyroskop, functional independence measures, neurorehabilitation

Abstract:

Inertial sensors are devices that allow monitoring of the movement. They are used also in physiotherapy, where they are applied to analyze walking and to detect falls. My bachelor thesis is focused on the possibility of using inertial sensors for monitoring patients affected by upper extremity. The theoretical part contains an outline of chosen foreign studies that deal with this issue. The second part is about theoretical neurorehabilitation, which is an important part of treatment for patients after brain damage. The practical part is processed in the form of quantitative research. The aim was to obtain and correlate the values obtained before and after the rehabilitation process. It was a total daily activity of upper limbs, which was measured by inertial sensors and the results of functional independence measures (FIM).