

## Review of thesis supervisor

Thesis title: Roball robot

Author: Juan Gustavo Maldonado Quispe

The goal of the thesis was to design and build a roball robot, i.e. a ball shaped robot.

The specific goals were:

- 1) mechanical redesign
- 2) electronics - connection of stepper motors and servo, controlled by Arduino.

There was an older version of the robot available. The thesis focused on the improvement of the robot, on its redesign.

The student has started with a state of the art review and was looking for inspiration from similar projects. Then he focused on the mechanical design. Some of the parts were designed as 3D printed, some were bought. The student had to familiarize himself with a 3D printer, with its control and how to create the models so that they are printable. He choose to design the robot with two DC motors, driven by H-bridges and controlled with an Arduino. He designed the connection and control program. For control of the robot he created an Android application that sends commands via Bluetooth. In the testing phase he made several improvements of the robot. The results are documented on charts and photographs in the thesis.

The student has regularly shown his progress on weekly meetings.

**I recommend the thesis for presentation and evaluate the thesis with grade „A - excellent“.**

Doc. Ing. Martin Novák Ph.D. – thesis supervisor

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