

Review of bachelor thesis – supervisor

Thesis title: Design and control of a hexapod robot

Author: Octavio Javier Linares Calderon

The goal of this thesis was to design and build a small size hexapod robot, preferably from 3D printed or laser cut parts. The student has started working on the project with searching for the inspiration among similar projects. The final dimensions were not given in advance, the robot should be small enough to be placed on a table so that future students can easily work with it. Some components were given to the student, such as the servos or the Arduino, especially the servos have basically set the dimensions of the robot.

The student has designed several versions of the robot. The first design was with 3D printed parts. After evaluating the robot parameters, especially weight, it was however decided to design another version from laser cut aluminum sheets. The second and third version had a similar design as the first version.

After making experiments with one leg, the production (laser cutting and bending) of all parts was ordered in an external company. Since the thesis was done in a time where the students were not allowed to access the school labs, the student had to assemble everything at his home without many tools available. He has successfully finished the assembly and programing. The robot is working with some minor problems as the student describes in the text.

It is a pity that the thesis does not contain some, at least simple, testing of the robot performance, such as if it can move with some extra weight, how fast can it move etc. Since the final (and only) text of the thesis was shown to me just 1 or 2 days before the submission deadline, it was impossible to add some extra chapter with an experiment.

In my opinion the thesis should also contain more pictures of the final robot, not just the one in figure 22. The student should “sell” better his work.

I also have to criticize the student’s approach to work and his regularity. He was working in a kind of cycles, where he didn’t show me any results for 1 or 2 months, then working probably for few days, then another pause without any news or contact for another 1 or 2 months etc. This has repeated over and over.

I recommend the thesis for presentation and evaluate it with grade: **“C – good”**.

Doc. Ing. Martin Novák Ph.D.

thesis supervisor