Supervisors review of diploma thesis

Thesis title: Laboratory model of delta robot
Author: Pinheiro Pereira Rodrigo Rafael

The goals of the thesis were essentially:

1) Design mechanically the delta robot
2) Connect all electronics, program the movements
3) Using image recognition, recognize objects on the conveyer belt, make the robot sort the objects based on shape

The student had to first design the mechanical of the robot. He used 3D modeling for the design, some the components were 3D printed. Then he had made the assembly.

For electronics control, he used an Arduino Mega 2560. The board controls servos based on commands from the PC.

The student had to learn OpenCV to recognize the images from the web camera to recognize object shapes. The objects position is then send to the Arduino to pick up the object.

The student was working independently, and came regularly to our weekly meetings. In my opinion, he has shown to be able to solve a given task independently.

I recommend the thesis for defense and evaluate it as "A - excellent".

Doc. Ing. Martin Novák Ph.D.

Department of Instrumentation and Control Engineering