THESIS SUPERVISOR'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Sensorless Field Oriented Control of a Brushless DC Motor**
Author's name:	**Byron Pitsillis Schutte**
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Circuit Theory
Thesis reviewer:	doc. Ing. Radoslav Bortel, Ph.D.
Reviewer's department:	Department of Circuit Theory

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment   **challenging**

How demanding was the assigned project?

The bachelor thesis required design and realization of the hardware and implementation of the software. This makes the thesis assignment quite challenging.

Fulfilment of assignment   **fulfilled with minor objections**

How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.

The hardware part of the thesis was realized fully. The motor control is functional in the sensored mode, but the sensorless operation is not fully functional.

Activity and independence when creating final thesis   **B - very good.**

Assess whether the student had a positive approach, whether the time limits were met, whether the conception was regularly consulted and whether the student was well prepared for the consultations. Assess the student's ability to work independently.

The student had active and initiative approach. In his design skills he is not yet fully independent, but I would asses them as very good.

Technical level   **C - good.**

Is the thesis technically sound? How well did the student employ expertise in his/her field of study? Does the student explain clearly what he/she has done?

The hardware was designed and realized quite well, but the written text and some of the software would benefit from improvements.

Formal level and language level, scope of thesis   **C - good.**

Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?

The thesis is sufficiently extensive, the structure of the thesis is quite logical, and the presentation is mostly clear. However, the written text contains numerous formal and grammatical mistakes, which decreases the quality of the thesis.

Selection of sources, citation correctness   **A - excellent.**

Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?

The use of the sources was adequate for the addressed problem.

Additional commentary and evaluation (optional)

Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.

See below.

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

Summarize your opinion on the thesis and explain your final grading.

In this thesis the student attempted to realize an electronic speed controller of a BLDC motor. The hardware design and realization are on a good level. Some parts of the control software, e.g. the sensored control works quite well; however, the sensorless control is not yet fully functional. Still, the amount work the student has put into the realization of the hardware and sensored control should be appreciated.

The text of the thesis suffers from numerous formal and grammatical mistakes, which decrease the quality of the thesis.

The student has put some visible effort into the realization of the thesis, but there are still noticeable shortcomings in several areas. Therefore, I grade this thesis as good (C).

The grade that I award for the thesis is **C - good.**

Date: **25.8.2021**   Signature: