

I. IDENTIFICATION DATA

Thesis title:	Methods of Precise Remote Distance Measurements
Author's name:	Ganegama Vithanage Don Hirushan George Perera
Type of thesis :	bachelor
Faculty/Institute:	Faculty of Mechanical Engineering (FME)
Department:	Instrumentation and Control Engineering
Thesis reviewer:	Prof. Ing. Jan Hošek, Ph.D.
Reviewer's department:	Fine Mechanics and Optics

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	easy
<i>How demanding was the assigned project?</i>	
The aim of this bachelor thesis was to perform review of instruments for precise remote distance measurement. The aim of the practical part of the thesis was to propose measurement tasks based on available sensors as surface distance measurement and a glass thickness measurement. So, the topic can be assessed as very easy.	

Fulfilment of assignment	fulfilled with major objections
<i>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.</i>	
The student prepared a report related just to sensors indicated as available in our lab. Student does not focus on general review of possible measurement methods. He found out Eddy current sensors, but he introduces it just in single paragraph in capture related to laser triangulation. The text looks like the student does not reached deep understanding of the sensors function. He prepared measurement setups for distance measurement and glass thickness measurement, but experiment description and data processing and presentation is at poor level. But, all points of assignment were lineally fulfilled even with major objections.	

Activity and independence when creating final thesis	D - satisfactory.
<i>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.</i>	
The student appeared low work activity. Work on pre-thesis projects was postponed and I had to repeatedly urge him for work on the thesis. It was very difficult to explain the student technical document format and he had to keep all references of used data. Finally, the student was able to prepare acceptable text of the sensors review. The student was able to design 3D models of the sensors fixtures and study the sensors SW for data acquisition. But the work suffers from logical approach and quality of data and results presentation.	

Technical level	E - sufficient.
<i>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?</i>	
The technical level of the thesis is low. The aim of the thesis was to prove that student is able to make research of the problem and make decision based on research analysis. The review of sensors related to the problem was finally performed at acceptable level, but it misses analytical work considering suitability of different sensors for particular problem solution. Student with difficulties completed experimental setups according supervisor advices but his own work approach was very passive and low invented. Results presented just as charts and tables without any explanation and discussion is example of student's low competence.	

Formal level and language level, scope of thesis	E - sufficient.
<i>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?</i>	
Final formal level of the thesis is low. There is not visible any logical approach from assignment through the review to the	

measurement task formulation and processing. Presentation of experimental part of the work is horrible.

Selection of sources, citation correctness

D - satisfactory.

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 thesis work refers to 23 mainly online sources. Not all of them are correctly cited. Student also used different ways of references of figures and text besides referenced to the same source.

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.

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

The aim of the thesis was to prove that student is able to solve given technical problem, to make the problem review, to analyze gathered information and to use it in synthetic design part of the thesis. The student appeared ability to find out general information related to the sensors indicated as available in our lab. The student was not performed deeper review showing another possible solution. The student proposed some technical solution of the measurement problem according my demands, but its experiment performance and data processing appears low quality level.

According my experience the student has capability to perform work according assignment, but with low activity and invention. But, I assume the bachelor thesis is formally acceptable and my overall evaluation of the thesis as supervisor is satisfactory.

The grade that I award for the thesis is **D - satisfactory**.

Date: **14.7.2023**

Signature: