

I. IDENTIFICATION DATA

Thesis title:	LiFi-technology Vehicle-to-Vehicle
Author's name:	Nishant Kamble
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Dpt. of Microelectronics
Thesis supervisor:	prof. Ing. Miroslav Husak, CSc.
Supervisor's department:	Dpt. of Microelectronics

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment	challenging
<i>How demanding was the assigned project?</i>	
The assignment of the diploma thesis was moderately difficult. The diploma thesis solves Vehicle-to-vehicle communication using LIFI technology under fog conditions.	

Fulfilment of assignment	fulfilled
<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 work was prepared according to the assignment and my comments	

Activity and independence when creating final thesis	A - excellent.
<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 author of the diploma thesis worked very actively and initiately. He often visited me for consultations. we continuously discussed individual points of the assignment, methodology and procedure for solving the assignment. He was independent and creative in finding new solutions. He continuously presented me with the achieved results of the work. The performance and approach to solving the work was very good, overall, the person of the graduate can be evaluated very positively.	

Technical level	A - excellent.
<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 work solves the design of the Vehicle-to-vehicle (V2V) communication using LIFI (Light Fidelity) technology under fog conditions (outdoor optical wireless communications to be unreliable). The effect of the fog conditions is experimentally analyzed in the LIFI- based V2V system. Recognizing distance between two vehicles, a tail-light color of a vehicle, a high density light-emitting diode (LED) was employed in the experiment.	
The author of the diploma thesis worked well with the assigned materials, he actively obtained new information from other sources. He responded dynamically to my ongoing comments and modifications to the tasks of the original assignment. The professional level corresponds to the requirements of the assignment. The requirements for the diploma thesis level are fully met.	

Formal level and language level, scope of thesis**A - excellent.**

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?

Minor errors of a formal nature occur in the work, chyby jsou však zanedbatelné, but the errors are negligible. English is the official language of the author. Diploma thesis fulfill the requirements for qualification diploma theses in terms of formal and professional.

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 graduate worked well with literary sources, he was active in finding new sources of information. Bibliographic citations meet the standards.

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.

The work is focused on communication in the automotive industry. The strength is in the methods of wireless communication used, the weakness of the work may be the difficulty of verifying the design of the system. The student was able to create a system design for wireless optics communication.

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.

The student fulfilled all the points of the assignment, she dealt well with the general analysis of the issue and the design of the solution concept. The cooperation between the student and the supervisor was very good during the solution of the work, she respected my comments specifying the assignment. I evaluate positively the results of the work, the student's approach to solving the assigned task, her performance and speeches and the overall results. I recommend the submitted bachelor's thesis for defense.

The grade that I award for the thesis is **A - excellent.**

Date: **28.8.2020**

Signature: Miroslav Husak