

## I. IDENTIFICATION DATA

<b>Thesis title:</b>	<b>"LiFi technology for vehicle to vehicle communication in poor weather condition"</b>
<b>Author's name:</b>	<b>Nishant KAMBLE</b>
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Electrical Engineering (FEE)
<b>Department:</b>	<b>Dept. of Microelectronics</b>
<b>Thesis reviewer:</b>	Ing. Josef NÁHLÍK, CSc
<b>Reviewer's department:</b>	Now: Pensioner; Previously: UCT Prague, Dept. of Solid State Eng.

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	<b>challenging</b>
<i>How demanding was the assigned project?</i>	
<b>The author's task is to study the possibilities of using LiFi technology for vehicle- to – vehicle (V2V) communications in poor weather conditions. This is a more difficult problem to solve it theoretically and practically too.</b>	

<b>Fulfilment of assignment</b>	<b>fulfilled</b>
<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>	
<b>The author studied current trends in V2V communication using LiFi. Then he designed device, implemented it and tested the device's functionality. Unfortunately, it is not only clear whether and how the author tested the effect of the weather (fog, rain, etc.).</b>	

<b>Methodology</b>	<b>correct</b>
<i>Comment on the correctness of the approach and/or the solution methods.</i>	
<b>Author's approach to task is correct. I have no principal comments to solution methodology.</b>	

<b>Technical level</b>	<b>B - very good.</b>
<i>Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?</i>	
<b>The submitted work has quite professional level. The author collected a reasonable amount of relevant literary sources and information from the Internet and used them appropriately to design and implement communication units on the front and rear of the vehicle.</b>	

<b>Formal and language level, scope of thesis</b>	<b>B - very good.</b>
<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>	
<b>The submitted thesis is organized in a logical way. I have no fundamental objections. I am only a user of English, not an English professor. I state that I understand the author's English well. The English is satisfactory. The final correction of thesis text was done carefully. There are minimum of formal grammar errors in the thesis (e.g. p. 13 in paragraph 4.3 point 3 should be "... to up link" instead of "... to uplink" (missing space)). The scope of the submitted work as a whole is reasonable.</b>	

<b>Selection of sources, citation correctness</b>	<b>A - excellent.</b>
<i>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?</i>	
<b>All sources of information used are duly cited. The author's personal contribution is mainly in the experimental part of the work and is sufficiently differentiated by the way of presentation. References are quoted in the usual way in Chapter 9. Internet links are working.</b>	

**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.*

**I have no further comments.**

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

The submitted diploma thesis has quite professional level. Designed, implemented and tested basic units of V2V communication between cars (using LiFi) inform the driver about the distance of vehicles and registration plates. The assigned task has been fulfilled and therefore I recommend the diploma thesis for defense

*Question for the diploma thesis defence:*

1. How did the author simulate the influence of the weather, especially the fog of the required degree?
2. Is there already a company that would offer similar facilities?

*The grade that I award for the thesis is:*

**B - very good.**

Date: **23.8.2020**

Signature: