THESIS REVIEWER'S REPORT

I. IDENTIFICATION DATA

Thesis title:	**Design of Power Conditioning Circuit for Energy Harvester**
Author's name:	**Chen Po-Wen**
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Microelectronics
Thesis reviewer:	Ing. Karel Setnička
Reviewer's department:	IMA s.r.o. (Institute of Microelectronic Applications), Praha 5, Na Valentince 1

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment **challenging**

How demanding was the assigned project?

Assignment corresponds to the level of master thesis. The topic is very recent and relevant in many companies.

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.

Student fulfilled all the goals. However most of the major design goals are covered briefly. For example the main goal is to design power conditioning circuit. Design is just shortly described as is, for this one purpose, without detailed design flow.

Methodology **correct**

Comment on the correctness of the approach and/or the solution methods.

Student studied recent work of many scientists and gained insight to the topic. He chose professional tools to design and simulate his electrical circuit and MEMS structures.

Technical level **B - very good.**

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?

Student knows the topic well. Although he could present his achievements better in conclusion section.

Formal 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?

Thesis has a good graphical level and it is organized well. Some sections could be shorter. English level is lower. Student often does not use correct tense. Work contains many typing errors and student often uses long complicated sentences.

Selection of sources, citation correctness **B - very good.**

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 appreciate that student used large number of literature and studied a lot of novel technical papers. On the other hand in his work is sometimes hard to distinguish his idea from those originating in literature. List of the literature is well assembled and it follows correct formal rules.

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.

Theoretical part of the thesis is a flow of summaries of many technical papers. As a reader I would appreciate more utilization by topic. Some thinks are mentioned multiple times, now and then even by the same sentence.

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. Pose questions that should be answered during the presentation and defense of the student's work.

This thesis gives wide view to energy harvesting topic and recent development in this area. Student proved his skills to create his design in a professional software. Simulations and results shows that the student learned to work with Cadance, CoventorWare and MEMS+ software.

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

Question:

In 5th chapter "Results and discussion" you mention 1mm height limitation in MEMS design. Why did you have this limit?

Date: **26.1.2021** Signature: