THESIS SUPERVISOR'S REPORT

I. IDENTIFICATION DATA

Thesis title:	Intelligent Cell Spray System
Author's name:	**Bc. Jan Andrys**
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Circuit Theory.
Thesis reviewer:	Prof. Quan Zhou
Reviewer's department:	Click here to enter text.

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment **challenging**

How demanding was the assigned project?

The project aims to create an intelligent cell spray instrument for burn care that can apply cell therapy on the wound surface evenly. The project is explorative in nature, where the goal is to understand the actual requirements and build prototypes to evaluate the ideas.

Fulfilment of assignment **fulfilled**

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 requirements and possible functionalities of the instruments is much clarified after the thesis work, and now we are ready to start a better-defined research and development project on this topic.

Activity and independence when creating final thesis **A - excellent.**

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 has demonstrated a high level of commitment and an excellent ability to work independently, requiring little supervision. Given the exploratory nature of the thesis work, the student has achieved outstanding results in a relatively short time frame.

Technical level **B - very 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 work has been carried out using the design science methodology, with each employed technique being thoroughly justified and implemented. Due to the exploratory nature of the work, most results are preliminary but have undergone both quantitative and qualitative evaluation. The technical level of the thesis is very good, as it strives to provide a solution while simultaneously accommodating legacy spraying hardware and the specific needs of surgeons.

Formal level and language level, scope of thesis **B - very 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 logically organized and well-written, with a clean and orderly layout. It largely adheres to academic standards, and its content is generally easy to understand. However, there is room for minor improvements. The use of the English language is largely very good.

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?

The thesis sufficiently cited both scientific literature and technical documents, whereas the cited documents cover both original work and up-to-date literature. The usage of citation is appropriate, most of the citations are in the literature review chapter, but also in the later chapter.

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 thesis addressed a critical challenge in healthcare instrumentation related to burn treatment. It explored in depth the potential techniques related to this issue, and proposed and developed a novel solution. Although the findings are preliminary, they hold significant potential to impact the field of application substantially.

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

The thesis has established pioneering research on the intelligent cell spray system for burn care. Executed with a remarkable degree of independence, the technical results contribute significantly to the continued evolution of this concept. Although the work is in its initial stages, with potential improvements needed in data analysis, academic writing, and language usage, the thesis has been graded as very good for its substantial relevance and impact in the application field.

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

Date: **5.6.2023** Signature: