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Study program „Biomedical and Clinical Technology“
Study branch „ Biomedical Engineering“

OPPONENT REVIEW OF DIPLOMA THESIS (MASTER THESIS)

student: Hanna Hlushak
with title: Accuracy evaluation of Langerhans islet volume estimation from microscopic images

	Evaluation criteria of the thesis	**Points**
1.	Fulfillment of the tasks and appropriateness of the structure of the thesis. (0 – 30)* *Each part of the master thesis assignment has to be processed in the final thesis. The full amount of points can be given to the excellent processed thesis only. The points are reduced according to the individual tasks of assignment that were not adequately processed. The aims of the thesis have to be included in the introduction of the thesis.*	25
2.	Theoretical level and the use of available literature in the thesis. (0 – 30)* *Opponent evaluates the quality of the theoretical part of the thesis and its relationship to the thesis assignment and a systematic order of the presented knowledge. Opponent of the thesis decreases the point about 15 points in cases where the cited knowledge is presented word to word. Insufficient amount of the theoretical knowledge or cited literature in the thesis can be a reason for lower point evaluation.*	25
3.	Range of experimental work (SW, HW) and applied knowledge. Quality of used methodology, and level of conclusions of the thesis. (0 – 30)* *The maximum number of points can be given in cases where the results are supposed to be published or it can be used in concrete company. Opponent decreases evaluation about 5 points for insufficiencies in the methodology. Inconsistency of used methods with theoretical part or inconsistent methodology approach can be a reason for decreasing evaluation about 15 points. Further decrease of evaluation can be given for insufficient discussion. 30 point can be given for excellent thesis and further activities as participation on grant solution or writing a publication.*	5
4.	Formalities and finish thesis (level writing, markings structure of the text, graphs, tables, citations in the text, bibliography, etc.). (0 – 10)* *Opponent evaluates formal part of the thesis according to the rules of writing, i.e. text formatting, structure of the text, a list of references, quality of charts and tables and the method of citation. The total points can be reduced for noncompliance of the rules by the maximum of 2 points for each disrespect attribute. Presence of grammatical errors, improper terminology and improper stylistics is a reason for reduction of point about 2-4 point. Standard terminology should appear within the thesis only (ability to express the technical language - 2 points), graphs are formed according to the common principles (see tolerance and the influence of statistical processing - 2 points). Graphs and tables are described by appropriate legends and everything is legible (2 points) and literature is cited according ISO690 and ISO690-2 rules (2 point).*	20
5.	**Total points**	75

** Further comments can be left of the back side of the evaluation*

Questions for a defense

1. Is it possible use 180 degrees only in measuring projections for Fakir volume estimation?
2. Specify an impact of the errors of 2D methods for volume estimation for clinical practice?
3.
4.

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The overall assessment of the diploma thesis:

A (excellent)	**B** (very good)	**C** (good)	**D** (satisfactory)	**E** (sufficient)	**F** (failed)
100-90 points	89-80 points	79-70 points	69-60 points	59-50 points	< 50 points
□**	□**	**X****	□**	□**	□**

** - check the appropriate classification level, in the case of evaluation of F (fail), please provide detail comments

Diploma thesis was evaluated at classification level **C** mentioned above.

Comments

Master thesis contains all required parts and deals with up to date topic. The aim of the thesis was fulfilled however the thesis contains a quite a lot of formal insufficiencies decreasing quality of the thesis, e.g. missing axis description, missing units, different scales in comparison of the outputs, improper tables etc. I am missing statistical evaluation of the measured data and discussion concerning clinical practice.
I recommend the thesis to a defense with evaluation C.

Name and Surname incl. degrees: doc. Ing. Martin Rozanek, Ph.D. Signature:

Institution: FBME, CTU in Prague Date: 14. 6. 2016

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