BACHELOR THESIS PEER REVIEW

I. PERSONAL AND STUDY DETAILS

Student's name:	**Martinez Lema David Sebastian**	Personal ID number:	**473070**
Faculty:	**Faculty of Biomedical Engineering**		
Study program:	**Biomedical and Clinical Technology**		
Branch of study:	**Biomedical Technician**		

II. EVALUATION OF THE BACHELOR THESIS

Bachelor's thesis title in English:

Design of control and actuator system of smart lower extremity brace

	Evaluation criteria	N. of points
1.	Fulfillment of the aim of the thesis and suitability of the structure of the thesis with respect to the topic (compliance with the assignment). (0 – 30)* Any part or sentence of the bachelor thesis assignment has to be dealt with. The full amount of points can be given to the excellent thesis only. The points are reduced in relation to the part of the assignment which is not properly dealt with or is not included at all.	30
2.	Theoretical level and application of accessible sources. (0 – 30)* The reader evaluates the relevance of the theoretical part of the thesis with respect to the assignment and structuring of the ideas. If word-for-word citing prevails, the reader shall decrease the rating by 15 points. (of course if copyright is abided). Moreover, another reason for decreasing the overall assessment is insufficient amount of theoretical knowledge, references and sources.	25
3.	Scope of experimental work (SW, HW) and applied knowledge, quality of methodology and conclusions of the thesis. (0 – 30)* Maximum number of points can be granted to a thesis which is fit for publishing. This aspect is judged with respect to enhancement of theoretical knowledge and practical implications. Creation of a model, SW or technical realization is valued. For minor methodological flaws, the assessment is reduced by up to 5 points. Inconsistency of elaboration with the theoretical background and unclear or not fully professional approach leads to a reduction by at least 15 points. Another decrease can be due to insufficient discussion. A total of 30 points can be given to a very complex and flawless work, including other activities such as participation in scientific-research project or grant, active participation in the writing publications, patents and utility models.	25
4.	Formal requisites and layout of the thesis (writing mastery, structuring, graphs, tables, citations in the text, list of references etc.). (0 – 10)* Reader evaluates formal requisites according to the rules of writing, attributes of final works, i.e. text formatting, structure of the text, references, quality of charts and tables and citations. Number of points can be reduced for noncompliance with the rules by the maximum of 2 points for each disrespected attribute. Grammatical mistakes, spelling mistakes and improper stylistics and terminology decrease the evaluation by 2-4 points. Only standard terminology should be used, especially in the English language (it is necessary to judge the ability to use the technical language - 2 points), graph are according to the rules (see tolerance and the influence of statistical processing - 2 points), captions are included for graphs and tables and everything is readable (2 points), citation rules are complied with according to ISO690 and ISO690-2 (2 points).	7
5.	**Total points**	87

* Verbal evaluation should be part of the Comments

III. PROPOSED QUESTIONS FOR THE DEFENSE (OPTIONAL)

1. Equations 4.5 and 4.6 assume no inertial forces. Can you justify this assumption?

2. Walking is a complex motion with more than 3 DOF. Do you consider also other motions like internal, external rotation or abduction?

3. Please explain Fig. 5.16. Why, there in non-monotonous course for simple motion?

IV. THE OVERALL ASSESSMENT OF THE LEVEL OF THE BACHELOR THESIS

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

** in case of F (failed) please explain in detail

I give the above grade to the bachelor thesis and I recommend/~~do not recommend~~ it for the defence.

V. COMMENTS

The research question is very demanding and it could not be expected to be solved within this thesis. Therefore, we might consider this as a preliminary study, not a final solution. The overall quality of the thesis is good and author did excellent work in implementation of numerical methods.

Introduction is rather short and modern exoskeletons constructions are mentioned briefly. Several assumption were introduced in mechanical design and analysis without detailed stating of their consequences. I would personally prefer a more detailed description of brace construction. The strong part of the thesis is an implementation of wireless control into existing design and design of control algorithm. In the results, author simply show the results without any discussion or explanation. One line description of all results is not satisfactory. Discussion could also be better elaborated. The limitations of proposed methods are not mentioned and discussed.

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Date: .....