

I. IDENTIFICATION DATA

Thesis name:	Predictive Control of an Unmanned Aerial Vehicle with a Time-Variable Mass
Author's name:	Diego A. Saikin
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Control Engineering
Thesis supervisor:	Dr. Martin Saska
Supervisor's department:	Department of Cybernetics

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment <i>Evaluation of thesis difficulty of assignment.</i>	challenging
The thesis content is challenging in sense of a required new design of motion planning approach with changing mass, understanding of UAV stabilization and control in ROS, and demanding experimental verification.	

Satisfaction of assignment <i>Assess that handed thesis meets assignment. Present points of assignment that fell short or were extended. Try to assess importance, impact or cause of each shortcoming.</i>	fulfilled
The assignment has been satisfied. The motion planning problem was solved and works properly as was numerically verified. During working on the thesis, it was decided with my full agreement to focus on more complex motion planning methods and experimental verification with real platform, which was not required originally, rather than solve the problem in a model predictive control fashion as was originally requested. Results with such impressive experimental evaluation are more valuable with respect of planned robotic publication.	

Activity and independence when creating final thesis <i>Assess that student had positive approach, time limits were met, conception was regularly consulted and was well prepared for consultations. Assess student's ability to work independently.</i>	B - very good.
Student was very active and regularly consulted the approach design. He creatively proposed new research ways. Sometimes, he could work more independently and try to find solutions of problems in literature before requiring help from colleagues and faculty members, but the selected approach was correct and achieved results are valuable.	

Technical level <i>Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.</i>	A - excellent.
Technical level is high and the achieved results go beyond the state-of-the-art in UAV motion planning. The content of the thesis promises to be a good journal publication, which will be compiled in following months.	

Formal and language level, scope of thesis <i>Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.</i>	B - very good.
The thesis is well written and the text is understandable. I could read the thesis in multiple iterations and my comments were included. In the final version, I have found only a minority of typos and small grammar errors. Usage of formal notation is sometimes not standard, but it does not influence well understandability of thesis content in my opinion.	

Selection of sources, citation correctness <i>Present your opinion to student's activity when obtaining and using study materials for thesis creation. Characterize selection of sources. Assess that student used all relevant sources. Verify that all used elements are correctly distinguished from own results and thoughts. Assess that citation ethics has not been breached and that all bibliographic citations are complete and in accordance with citation convention and standards.</i>	A - excellent.
The literature review was compiled carefully and includes a large number of relevant sources. Citations are used correctly.	

Additional commentary and evaluation

Present your opinion to achieved primary goals of thesis, e.g. level of theoretical results, level and functionality of technical or software conception, publication performance, experimental dexterity etc.

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III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Summarize thesis aspects that swayed your final evaluation.

Student faithfully solved the given problem and the achieved results are valuable and exceeding the state-of-the-art in UAV motion planning. The thesis assignment was fulfilled with some modifications that we compounded together. The aim of the modifications was to maximize output of the thesis and to be able to achieve a valuable journal publication with the obtained results. Since I have to evaluate mainly the results and student's approach to goals fulfilment, I evaluate handed thesis with classification grade **A - excellent**.

Date: **13.6.2018**

Signature: