SUPERVISOR'S OPINION OF FINAL THESIS

I. IDENTIFICATION DATA

Thesis name:	**Mission planning for cooperative construction by a team of unmanned aerial vehicles**
Author's name:	**Jasna Petric**
Type of thesis :	master
Faculty/Institute:	Faculty of Electrical Engineering (FEE)
Department:	Department of Control Engineering
Thesis supervisor:	Martin Saska
Supervisor's department:	Department of Cybernetics

II. EVALUATION OF INDIVIDUAL CRITERIA

Assignment **challenging**

Evaluation of thesis difficulty of assignment.

The assignment was challenging as it requires knowledge of task allocation and mission planning approaches, but also significant implementation works in ROS and Gazebo to enable deployment of multiple UAVs sharing their workspace.

Satisfaction of assignment **fulfilled**

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.

All points of the assignment were fulfilled and even the HW experiment with multiple drones was implemented beyond the mandatory tasks of the assignment, which I did not expected.

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

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.

Student's activity was excellent. She worked hard and helped us in many tasks not directly related to her thesis. She significantly contributed into the video report of the MBZIRC 2020 competition, which qualified us to the finals of this challenge.

Technical level **E - sufficient.**

Assess level of thesis specialty, use of knowledge gained by study and by expert literature, use of sources and data gained by experience.

It is lower mainly in the parts dealing with task planning and task allocation. Mainly the used terminology was not solid, which could be caused by the fact that student did not attend our bachelor program with the subject Cybernetics and artificial intelligence.

Formal and language level, scope of thesis **C - good.**

Assess correctness of usage of formal notation. Assess typographical and language arrangement of thesis.

The thesis is sufficiently well readable and it contains an acceptable number of typos and grammar errors. The results are well presented.

Selection of sources, citation correctness **A - excellent.**

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.

The state of the art covers 5 pages and it includes 64 references from well recognized conferences and journals. The references are well cited following all robotic standards.

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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.
Please insert your commentary (voluntary evaluation).

III. OVERALL EVALUATION, QUESTIONS FOR DEFENSE, CLASSIFICATION SUGGESTION

Summarize thesis aspects that swayed your final evaluation.

To sum up my evaluation, I have to highlight that student worked intensively on the thesis and was a valuable member of our MBZIRC team, where she helped also with the video report, which was beyond the thesis. The assignment was exceeded also by the HW experiments. On the other hand, the technical quality of the planning part of the thesis has lower quality and did not bring expected contribution. During the works on the thesis we decided to be focused more on communication and technical aspects of coordination of multiple UAVs, which we found more important regarding the specification of rules from the challenge organizers.

Putting these together, I evaluate handed thesis with classification grade **C - good.**

Date: **5.6.2019** Signature: