

Jury Member Report – Doctor of Philosophy thesis.


Name of Candidate: Evgeny Tsykunov

PhD Program: Engineering Systems

Title of Thesis: Human-swarm interaction for the guidance and deployment of drones using impedance control and tactile feedback

Supervisor: Associate Professor Dzmitry Tsetserukou

Name of the Reviewer: Clement Fortin

<p>I confirm the absence of any conflict of interest</p> <p>(Alternatively, Reviewer can formulate a possible conflict)</p>	<p>Signature:</p>  <p>Date: 11-01-2021</p>
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The purpose of this report is to obtain an independent review from the members of PhD defense Jury before the thesis defense. The members of PhD defense Jury are asked to submit signed copy of the report at least 30 days prior the thesis defense. The Reviewers are asked to bring a copy of the completed report to the thesis defense and to discuss the contents of each report with each other before the thesis defense.

If the reviewers have any queries about the thesis which they wish to raise in advance, please contact the Chair of the Jury.

Reviewer's Report

Reviewers report should contain the following items:

- Brief evaluation of the thesis quality and overall structure of the dissertation.
- The relevance of the topic of dissertation work to its actual content
- The relevance of the methods used in the dissertation
- The scientific significance of the results obtained and their compliance with the international level and current state of the art
- The relevance of the obtained results to applications (if applicable)
- The quality of publications

The summary of issues to be addressed before/during the thesis defense

The submitted thesis comprises 8 chapters which provide a high-quality description of the various aspects of his research project addressing a number of important issues concerning the control of a number of drones.

Evgeny Tsykunov's thesis is generally well structured into three research questions related to the objective of the thesis. In chapter 2, he presents a comprehensive and critical review of the literature on his field of research. The various parts of the related existing research are very well presented.

The research methods that are used to solve the various approaches are very appropriate and comprise extensive experimental work on micro-drones in formation.

The research work is very original and covers important topics on the control of swarm of drones. The detailed research work is generally of very high quality and can possibly be applied in practice at a larger scale.

An analysis and verification of the most important results are clearly presented.

The research publications are of high quality and confirm the high relevance and quality of the research work.

I have already submitted a number of comments to the candidate.

Provisional Recommendation

I recommend that the candidate should defend the thesis by means of a formal thesis defense

I recommend that the candidate should defend the thesis by means of a formal thesis defense only after appropriate changes would be introduced in candidate's thesis according to the recommendations of the present report

The thesis is not acceptable and I recommend that the candidate be exempt from the formal thesis defense