

POSITION

By Assoc. Prof. Dr. Danyo Marinov Lalov, Member of the Scientific Jury in accordance with Order N2166 / 05.12.2019. of the Director of KIT BAS for the dissertation on the topic RESEARCH ON PERSONAL AIRPORT TRANSPORT IN CITY ENVIRONMENT with author **M.Sc. Georgi Petev Georgiev** for the award of educational and scientific degree "Doctor " in the professional direction: 5.5" Transport, Shipping and Aviation "scientific specialty:" Dynamics, ballistics and flight control of aircraft " (Management of personal aviation transport in urban conditions)

1. General characteristics and evaluation of the thesis

The dissertation work of Master Georgi Petev Georgiev contains an introduction, four chapters, a conclusion, thank-you notes and a bibliography. The material contains new methods for implementing aviation mobility management in an urban environment. The doctoral student made a good choice for the subject and subject of the research. The research methodology is implemented according to a scheme that allows solving the main tasks set in the dissertation.

2. Assessment of the relevance and level of knowledge of the problem

Operations performed by urban mobility in the third dimension airspace (flying vehicles) necessitate the study of personal aviation in urban areas. The existing results do not fully cover the development of the idea of EIP - SCC, so the current doctoral work complements the research on this problem.

Despite the intensity of research that has been developed in recent years in the field of management of smart cities and municipalities, there are still unresolved issues, which makes the relevance of doctoral work very clear.

3. Evaluation of the scientific, applied and applied contributions of the dissertation.

The dissertation work was developed in volume of 137p. It is illustrated with 74 figures and 24 tables.

The simulation studies shall take into account the morphology, existing transport systems and infrastructure in the reference city, as well as the needs for improving transport. Before conducting flight simulations, consider the author's UAM implementation plan as a time and meaning sequence. Simulations of flights with Mission Planner software have been performed to analyze AV copter flights

The chosen research methodology answers the set goals and tasks of the dissertation. The simulation models developed for the cities of Ingolstadt and Plovdiv allow us to draw conclusions about the efficiency of this type of transport.

In his dissertation, the author has made ten scientific, scientifically applied and applied contributions. The conclusions are consistent with the urban aviation mobility simulation model used. I accept and appreciate the positive contributions that are his own ones.

4. Evaluation of dissertation publications

The research carried out in the dissertation is closely related to the research work of the doctoral student, which is clearly evident from his publications and reports presented at prestigious forums. This, as the quotations presented at the time, proves that the above contributions have been recognized by the scientific community and are the personal work of Master Georgi Georgiev.

5. Evaluation of the abstract

The abstract is a summary of the thesis. Completely corresponds to the dissertation work.

6. Conclusion

The dissertation developed by Master Georgi Georgiev is an in-depth and complete scientific work on the study of a current problem. Scientific, applied and applied contributions have been made, proving the ability of the doctoral student to independently develop important issues for theory and practice.

The dissertation is developed in accordance with the requirements of the Law on the Development of the Academic Staff of the Republic of Bulgaria for the acquisition of educational and scientific degree "Doctor", and the Regulations for its implementation. Considering the volume and quality of the dissertation work, the stated scientific, applied and applied results, I give my positive assessment and propose to the jury to award the scientific and educational degree "doctor" in the scientific specialty: "Dynamics, ballistics and flight control of aircrafts" (Management of personal aviation transport in urban conditions) by **M.Sc. Georgi Petev Georgiev**.

Position author:

February 14. 2020

Assoc. Prof. Dr.-Ing. Danyo Lalov

Dolna Mitropoliya