

STATEMENT

From **Prof. Lyubka Atanasova Dukovska**,

Institute of Information and Communication Technologies
Bulgarian Academy of Science

About dissertation paperwork for PhD title in discipline **5**. “Technical sciences”, division **5.2**. “Electronic, Electrical engineering and Automation”, PhD program **02.21.07**. “Automated systems for information processing and management”

Dissertation author: **Veneta Hristova Yosifova**

Dissertation topic:

“Methods and means for observing the energy efficiency of buildings and constructions”

With order № 187/31.10.2018 from the director of Institute of Information and Communication Technologies in BAS, I am included in the scientific jury for PhD dissertation defense of the student **Veneta Hristova Hristova — Yosifova**, for achieving a PhD in science title.

Veneta Hristova Hristova — Yosifova started her education in IICT—BAS with order №111 of IICT — BAS Director in 04.07.2014 г., for a period 01.09.2014 г. - 01.09.2018 г. Her topic of work is confirmed with the IICT-BAS Science Consul in 18.03.2015 with Protocol № 5.

The dissertation work has 132 pages. It is structured in four chapters, conclusion, scientific results, commercialization plan, references, originality of results declaration and list of dissertation’s publications. The connection between the chapters is backed by the logic of the exposition and gives the idea of the whole scientific research concept.

For overall evaluation of the dissertation, the requirements according to The Law on the Development of Academic Staff in the Republic of Bulgaria (ЗПАКРБ) should be fulfilled as well as the Regulations and the standards of its application (ППЗ), which are:

1. According to art. 6(3) from ЗПАКРБ “ **The dissertation should include scientific or scientifically-applied results, that resemble authentic science contribution. The dissertation should show, that the candidate has deep theoretical knowledge over the discipline and the abilities for own scientific researches**”.

2. According to art. 27(2) from ППЗ the dissertation has to be presented in a form and volume that fulfill the specific requirements of the initial unit. **The dissertation must include: front page; table of contents; introduction; exposition; conclusion — a brief about the results with originality of the result declaration; references.**

The Goal of the dissertation is to observe the building’s and facilities energy efficiency and new methods and means for its increasing to be suggested

For achieving this goal, the following tasks are given:

1. To be overviewed, analyzed and systematized the main factors concerned to buildings energy efficiency;
2. Building’s effect over climate changes to be studied;
3. The current problems in buildings energy efficiency to be studied;
4. To be proposed a plan for energy efficiency increasing of typified office area in standard office building;
5. To be conducted real experiments for testing and comparing modern heating methods and also discovering hidden defects in applied energy efficient solutions;
6. To analyze the research results;

I find that the initial goal and the formulated tasks, resemble the actuality and the significance of the dissertation work, that comprise useful results for evaluating building’s and facilities energy efficiency and the opportunity for including them in engineering practice problem-solving.

In the proposed list of publication are included six publications. The quality of the publications is proved by their publication in specialized editions and participation in specialized conferences.

There isn't information about quotation.

I accept the PhD student's contribution formulation, as they have scientifically-applied contribution and application character. Such defined they can be suggested as enriching the existing scientific field with new knowledge.

The autoreferate has a volume of 43 pages. It truly reflects the essence and content of the dissertation, including the goal, subject, object and tasks of dissertation research and the ways of their realization.

For overall evaluation of the dissertation, the requirements according to The Law on the Development of Academic Staff in the Republic of Bulgaria (ЗПАССБ) should be fulfilled as well as the Regulations and the standards of its application (ПППЗ), according to which I have the following remarks:

1. The dissertation doesn't fulfill the requirements of art. 27(2) from ПППЗ. **The dissertation has to begin with introduction and ends with references.**
2. The list of references doesn't fulfill the requirements for bibliographical reference.
3. The presentation of the variety of modern methods and means for energy efficiency increasing and the modern architectural examples are well illustrated, but doesn't highlight the importance of the results from the original experimental work.

Conclusion

I accept that the overall requirements of **the Law on the Development of Academic Staff in the Republic of Bulgaria (ЗПАССБ) and the standards of its application (ПППЗ) are fulfilled**. After reading the dissertation work and the conducted publications, analyzing their importance and included contributions, I evaluate the dissertation **positively** and recommend to the scientific jury to award Veneta Hristova Hristova — Yosifova with the educational and scientific degree

“PhD / doctor” for division 5.2. “Electronic, Electrical engineering and Automation”, PhD program 02.21.07. “Automated systems for information processing and management”

15.11.2018
Sofia

