

OPINION

by **Corr. Member Lyubka Atanassova Doukovska, DSc**
from the Institute of Information and Communication Technologies,
at the Bulgarian Academy of Sciences,
on the Thesis for awarding educational and scientific degree PhD,
under the Scientific Field 5. Technical Sciences,
the Professional Area 5.3. Communication and Computer Techniques,
the Scientific PhD Specialty “Computer Systems and Technologies”

Author of the PhD Thesis: **Tihomir Videv Videv**

PhD Thesis Title: **Generalized Nets models of Data Mining processes for management and protection of a smart home**

This Opinion was prepared on the basis of Order UD No. 64 from 21.02.2024, by the Rector of the University “Prof. Dr. Assen Zlatarov” - Burgas, as well as per Art. 44 of the Rules on the Terms and Conditions for Acquisition of Academic Degrees and Occupation of Academic Positions at the University “Prof. Dr. Assen Zlatarov”- Burgas, in connection with a decision of the Faculty Council of the Faculty of Technical Sciences, with protocol No. 5 from 15.02.2024 and report No. 632 from 19.02.2024, I have been appointed as a member of the Scientific Jury regarding the PhD thesis of the PhD student Tihomir Videv Videv for awarding the educational and scientific degree “Doctor of Philosophy” (PhD), the Scientific PhD Specialty “Computer Systems and Technologies”, with scientific supervisors – Acad. Prof. Krassimir Todorov Atanassov, DSc, DSc and Prof. Sotir Nikolov Sotirov, PhD.

Tihomir Videv Videv was born on July 08, 1972 in Burgas, Bulgaria. In 1998, he acquired a master's degree in specialty “Management and Marketing” at the University “Prof. Dr. Assen Zlatarov” - Burgas. In 2015, he obtained a master's degree in specialty “Computer systems and technologies” at the University “Prof. Dr. Assen Zlatarov” – Burgas.

As a member of the Scientific Jury I have received:

1. Order UD No. 64 from 21.02.2024, by the Rector of the University “Prof. Dr. Assen Zlatarov” - Burgas.
2. Autobiography of Tihomir Videv Videv.
3. Abstract of the dissertation for the educational and scientific degree PhD.
4. Dissertation for the educational and scientific degree PhD.
5. Copies of the publications included in the PhD thesis.
6. Accompanying documents according to the procedure for the defense of the PhD thesis.

In order to form the final evaluation of the PhD thesis, the requirements of the *Development of Academic Staff Act in the Republic of Bulgaria* are implemented the specific requirements in the Act’s Institutional Regulation shall be taken into consideration, where the respective norms are:

1. Pursuant to Art. 6 (3) of the *Development of Academic Staff Act in the Republic of Bulgaria*, PhD thesis should contain scientific or scientific-applied results, which represent an original contribution in science. The PhD thesis must indicate that the candidate has in-depth theoretical knowledge of the relevant specialty and ability for independent research.

2. According to Art. 27 (2) of the specific requirements in the Act’s Institutional Regulation, PhD thesis should be presented in a form and volume corresponding to the specific requirements of the primary unit. The PhD thesis should contain: a cover page; content; introduction; exhibition; conclusion - a summary of the results obtained with a declaration of originality; bibliography.

The PhD thesis consists of 141 pages. Its structure includes an introduction, three chapters, contributions to the PhD thesis, guidelines for future research, a list of publications on the PhD thesis, references and an appendix.

The aim of the PhD thesis is “to study various processes from the theory of Data Mining, by modeling them using the Generalized Nets and the software implementation of the main ones”. To achieve this aim, seven tasks have been formulated.

I find that the aim and the problems formulated reflect the topicality and significance of the presented dissertation work, as well as the possibility to apply the results obtained in the practice.

The list of publications on the PhD thesis includes eight publications. All publications are co-authored. All articles are in English and have been published in peer-reviewed scientific journals and papers in international scientific forums.

The data presented give me a reason to conclude that the research is self-contained and has been given the necessary publicity among the international scientific community, both at reputable scientific forums abroad and in the country.

I accept that the contributions so formulated could be considered to have scientific and common application. This separation would allow detailing the results obtained in accordance with the specificity of their significance. Such defined contributions can be defined as enriching the existing scientific field with new knowledge.

The PhD thesis abstract is 51 pages long. It reflects in detail the nature and content of the dissertation, including the purpose, subject, object and tasks of the dissertation research and the ways of their realization.

In order to form the final evaluation of the PhD thesis, the requirements of the *Development of Academic Staff Act in the Republic of Bulgaria* and its Implementation Rules are to be taken into account, according to which I have the following remarks and recommendations:

1. The content of the dissertation does not meet the requirements of Art. 27 (2) of the *Development of Academic Staff Act in the Republic of Bulgaria*. The PhD thesis should contain a conclusion - summary of the obtained results and end with a bibliography.

2. The presence of stylistic errors in the text is noticeable.

3. The list of the references doesn't comply with the requirements for bibliography.

4. The PhD student should direct his efforts to increase his contributions to reputable international publications.

Conclusion

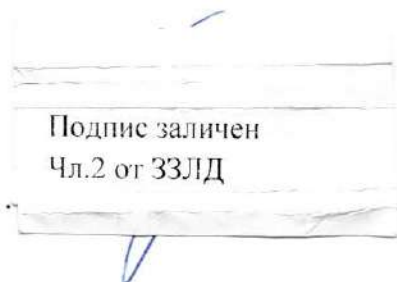
In conclusion, I accept that the requirements of the *Development of Academic Staff Act in the Republic of Bulgaria* and the specific requirements in the Act's Institutional Regulation are fulfilled. After my introduction to the dissertation thesis and its publications, an analysis of their significance and the contributions they make, I give my positive assessment and I recommend to the Honorable Jury to award the educational and scientific

degree PhD to Tihomir Videv Videv in the Scientific PhD Specialty “Computer Systems and Technologies”.

18.03.2024

Sofia

Signature:



/Corr. Member Lyubka Doukovska/